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DODGE TRUCKS

Power . . . Speed . . . Dependability . . . Economy. 124
standard types—ranging in capacity from ½-ton to 3-tons.
See the type that fits your needs. Drive it. Compare it.

BROCKWAY-INDIANA TRUCKS



Brockway-Indians—today's greatest truck values—a stabilized line!

Fleet operators and motor-truck distributors are swinging to Brockway-Indiana Trucks practically for the same reasons.

These swift, rugged, good-looking power units offer the biggest values on the market today. They are specialized haulage units—exactly matched to any need through a policy of flexible standardization.

Brockway-Indians are a stabilized line because of the close cooperation and more permanent alignment of the Brockway-Indiana organization with the foremost parts manufacturer. There's never any complication of dealers' inventories or service problems through the changing of units to effect manufacturing economies.

Whether you buy or sell trucks, get all the facts. Visit nearest branch or write Eastern Division, Brockway Motor Truck Corporation, Cortland, N. Y.; Western Division, Indiana Truck Corporation, Marion, Indiana; Executive Office, 420 Lexington Avenue, New York City; General Offices, Cortland, New York.

An international institution having 40 direct factory branches and 350 dealer connections in America and 135 distributors in 85 foreign countries. Real convenience for the truck buyer!

Unusual financial strength and stability. Now one of the three largest exclusive manufacturers of motor trucks—and growing stronger all the time.

One-to-ten-ton Fours and Sixes, Four-wheelers and Six-wheelers. \$995 to \$9750, f.o.b. factories.

A few desirable franchises are still open at home and abroad. Write or wire!

POWER MATCHED TO INDUSTRY



NEXT in importance only to the part Hyatt played in the early development of the automobile is the thrill which comes today from being a contributor to motoring satisfaction in every corner of the globe.

Just as Hyatt placed all its energy, experience, and facilities at the disposal of an infant industry, and helped solve its initial problems, so, too, has Hyatt kept pace with the steady growth of automotive activity, right up to the industry's present world-wide spread.

Highways of the World are Hyattways



Hyatt's ability and willingness to serve the industry was a big factor, but greater than this is the excellence of Hyatt Quiet Roller Bearings themselves. Always foremost in design, ease of installation and performance, it is only natural that Hyatt bearings should be continuously employed by the country's leading automotive manufacturers.

Proved performance over more than a quarter-century of automotive progress, and the commanding position Hyatt has always maintained, permits us to say: "The Highways of the World are Hyattways!"

HYATT ROLLER BEARING COMPANY

Newark Detroit Chicago Pittsburgh Oakland

HYATT

QUIET ROLLER BEARINGS



...in a side-show it's
SWELL!



...in a dual it's **WASTE!**

YES, gents, it IS indeed a privilege to be able to watch the "Or-ee-entul mahvul" shake and sway—it's *swell* to get, for only the tenth part of a dollar, a good eyeful of her entrancing wiggles. . . .

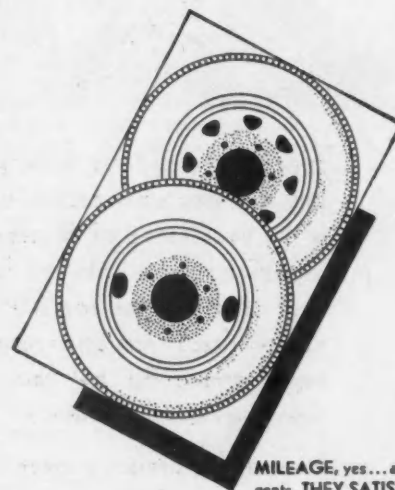
. . . But, gents, how do these same merry movements strike you when you find them in *your duals*? Don't they burn you up? And don't they burn up your tires?

SURE they do! Dual shimmys are the greatest little birds in the world for scuffing your cords into the junk heap—and giving you a big, fat pain in the pocketbook!

Budd-Michelin Duals won't put on a wiggle show for anyone. . . there's no more shimmy in them than there is in Plymouth Rock.

That's because they're mounted in the vise-like grip of *double* cap-nuts. Each section of a Budd Dual is held to the hub by its own separate set of cap-nuts. First the inner section is fastened on by *one* set. Then the outer section is anchored by *another* set. Not a hair's-breadth wiggle can sneak into *that* set-up!

And that rock-solid mounting is why all the wisest babies on wheels are rolling on Budd Duals.



MILEAGE, yes. . . and
gents, **THEY SATISFY**

Budd Duals

"SUCH POPULARITY MUST BE DESERVED"

COMMERCIAL CAR JOURNAL

and OPERATION & MAINTENANCE

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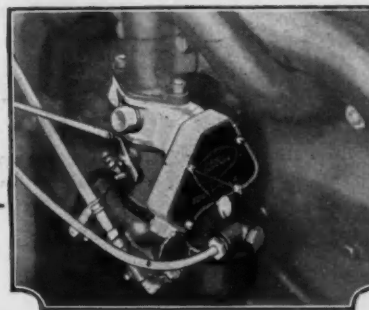
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The Commercial Car Journal
and Operation & Maintenance



HANDY GOVERNOR

"Our operating costs have been cut considerably, and our reputation on the highway is a whole lot better, since we have been using Handy Governors. We have also cut our accidents 50%."

Zinsmaster Bread Company, by E. A. Wahlund, Minneapolis, St. Paul, Duluth, Superior, Hibbing.

■ ■ ■

Bakery fleets feed America. Their superintendents don't guess their costs of delivery. They KNOW.

The Zinsmaster fleet contains 140 Handy-Governed vehicles. They are Handy-equipped for only one reason—because IT PAYS.

The tires of the Zinsmaster fleet last longer. The brake linings stand up far beyond their allotted time. Motors and chassis, relieved of the overspeeding menace, require less attention and repair.

There's a Handy distributor nearby. Ask him for the full story.

HANDY GOVERNOR CORPORATION

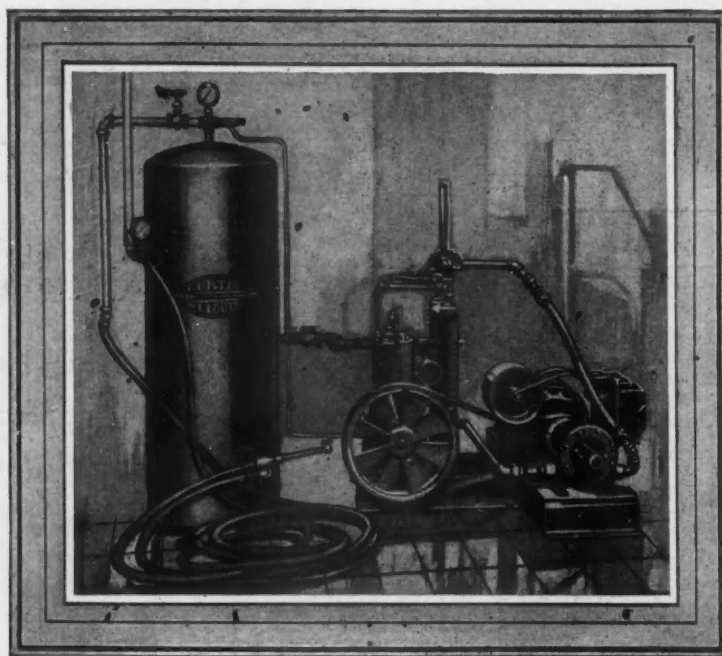
3929 West Fort St.

Detroit, Michigan



July, 1930

The money value of complete bus cleaning service!



Spray cleaning engines is only one of the many additional services provided by the compressed air of the Curtis Washer.

Buses in the shop pay no dividends. For that reason, cleaning must be done rapidly, yet thoroughly. And speed can be combined with thoroughness only with the right mechanical equipment.

Just how well the Curtis Compressed Air Car Washer fits such specifications is shown by the experiences of bus companies using it.

For instance, the operator of a large bus terminal in southwest Missouri reports that "two Curtis washers are each saving 5 men's work, paying for themselves every five weeks". Another shows that his outfit pays for itself every 57 days. Another company uses a Curtis to keep up a servicing schedule which forces them to wash a double-deck bus in 3 minutes.

Direct saving of time and money on wash-

ing is not the only advantage gained. Better cleaning makes inspection easier and shows up the need for important repair work which, if overlooked, might cause delays or even accidents.

Also there are a dozen services other than washing which can be done with the compressed air provided by the Curtis Washer—spray-cleaning motors; spraying polish; spraying paint or paint remover; blowing water or dust out of crevices; or providing for tire inflation; operation of lifts, chipping-hammers, riveters, surface-rubbers—all kinds of air tools.

The unlimited number of uses for the Curtis Compressed Air Car Washer gives it an almost inestimable money value to any bus operator.

CURTIS

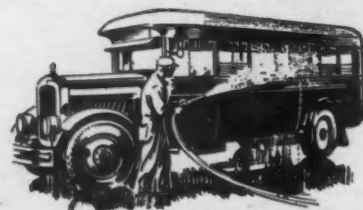
CURTIS
Pneumatic Machinery
Company
St. Louis

Curtis Pneumatic Mchy. Co.,
1959 Kienlen Ave., St. Louis—518V Hudson Term., N. Y.
Please send catalog and information about (State product you are

interested in) _____

Name _____

Address _____



DEALERS

Write for information explaining how the Robert Bosch Spark Plug builds customer confidence for you and almost doubles your spark plug profits at the same time.



Spark Plug Mileage

?
Tie this if you can!

1926—The Schenck Transportation Co., of Floral Park, Long Island, installed their first set of Robert Bosch Pyro-Action Spark Plugs.

1928—Two years later, they wrote: "In reply to your letter of July 9th

... we have not found it necessary to remove the type Z40/S4 Robert Bosch Plugs as yet. On a special test, they have gone a distance of over 18,000 miles to date and are still in good condition. During this (two year) period we have conducted tests on other plugs which have not proven as durable as Robert Bosch Plugs."

1930—Two years later, they write: "We can put Robert Bosch Plugs on our buses and forget about ignition trouble. We've never had a Robert Bosch Plug foul up. We now operate 100% on them."

★ ★ ★

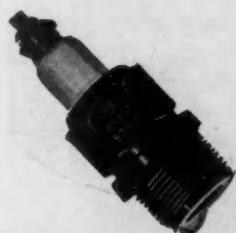
A four-year test of absolute dependability, unusual mileage achievements, freedom from

attention... and the Schenck Transportation Co., too, standardizes on Robert Bosch Pyro-Action Spark Plugs.

They join a long list of bus and truck companies who are building up mileage records with Robert Bosch Pyro-Action Spark Plugs: The Rollo Transit Corp. reports 50,000 to 60,000 miles per set, the Erie Railways averages 27,735 miles, the North Shore Bus Co. does better than 30,000 miles per set. Bus and truck operators everywhere find in the correct type of Robert Bosch Plug the answer to lower maintenance costs, higher fleet efficiency.

Mark that statement "the correct type." It means that there is a special Robert Bosch Spark Plug for every engine need... every condition of operating service. Avail yourself of expert advice regarding the type of Robert Bosch Pyro-Action Spark Plugs best suited to your particular needs. Consult your Robert Bosch Service Station... they will be glad to prescribe a set of Robert Bosch Plugs that you may test on your buses or trucks without obligation. Or write direct for full information.

ROBERT BOSCH MAGNETO CO., INC.
3603F Queens Blvd., Long Island City, N. Y.



All Robert Bosch Pyro-Action Spark Plugs bear the full name "ROBERT BOSCH" and this trade mark of Robert Bosch A.-G.



Famous Fleets Depend on
Robert Bosch Pyro-Action Spark Plugs

Read This Letter—Then Stop Wishing

TELEPHONE 407 P. O. BOX 430

CHARLES H. VOLLMER
MOTOR BUS LINES
AMSTERDAM N Y

March 8, 1930

Keasbey & Mattison Company.
9-15 Park Place,
New York City, New York.

Gentlemen:

It might be of interest to you to learn we are having very good service from your Ambler Autobestos Bus Truck Lining.

We are operating a fleet of Model A.L., B.K., and B.C Mack Buses daily, over a route of a 12 to 15% grade another route of 10 to 16%, averaging 1 1/2 miles daily

Ambler Autobestos on actual test has been giving us on a average of 20,000 miles per bus.

Yours for a Ambler Booster.

Yours very truly,
CHAS. H. VOLLMER MOTOR BUS LINES
BY *Charles H. Vollmer*

CHV:MAR

This thing of wishing you could get greater mileage between brake relines can stop right now. Mr. Vollmer tells you he is averaging 20,000 miles per vehicle with Ambler Autobestos Bus-Truck Brake Lining.

20,000 miles is a lot of miles to get out of brake lining especially in country where the grades are as great as those over which the Vollmer Lines operate. These heavy buses travel over a route which includes one and a quarter miles every day over 16% grades. Here's substantial evidence of the long life and dependability of Ambler Autobestos.

Wishing you could get better mileage won't get it for you, but a reline with Ambler Autobestos Bus-Truck will. Order from a K & M distributor today.

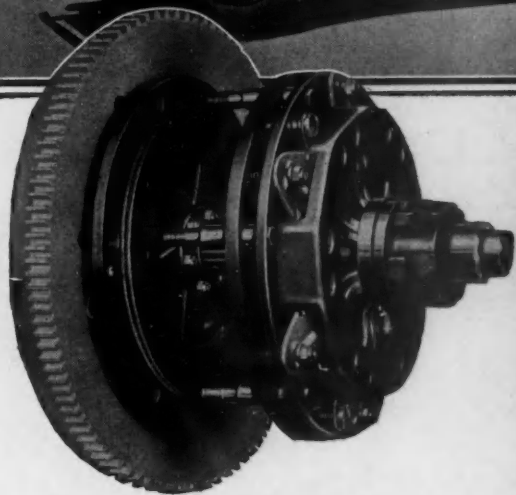
KEASBEY & MATTISON
COMPANY,

Ambler Pennsylvania

AMBLER
AUTOBESTOS
BUS - TRUCK
LINING



LONG CLUTCHES ARE USED ON THE COMPLETE LINE OF AUTOCAR TRUCKS

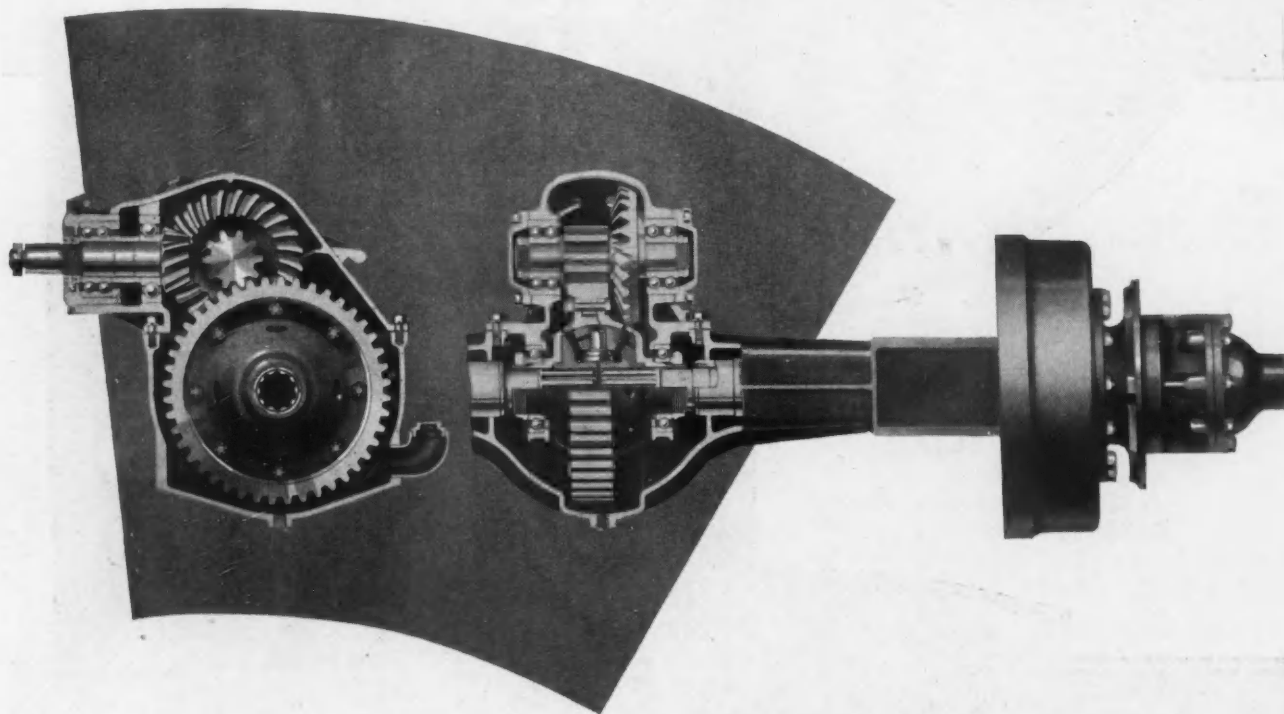


LONG PRODUCTS
AUTOMOTIVE CLUTCHES
AND RADIATORS

LONG MANUFACTURING CO.
DETROIT MICHIGAN

LONG

STAMINA!



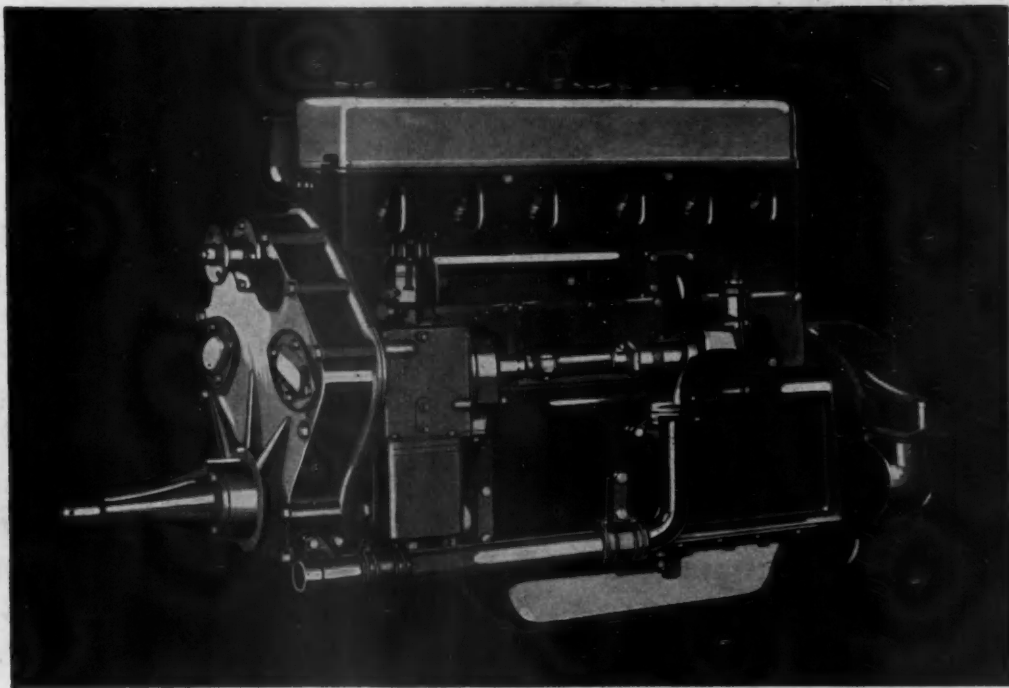
Down in the pits, where extra shocks of load and power application are *expected*—*stamina counts*. If the rest of the chassis has the tough strength of the Wisconsin Axle, don't worry about the truck—it will deliver.



WISCONSIN AXLE CO.
OSHKOSH - - WISCONSIN

SPECIFY CONTINENTAL

*Dependable power acts on your
balance sheet as well as
under your hood*



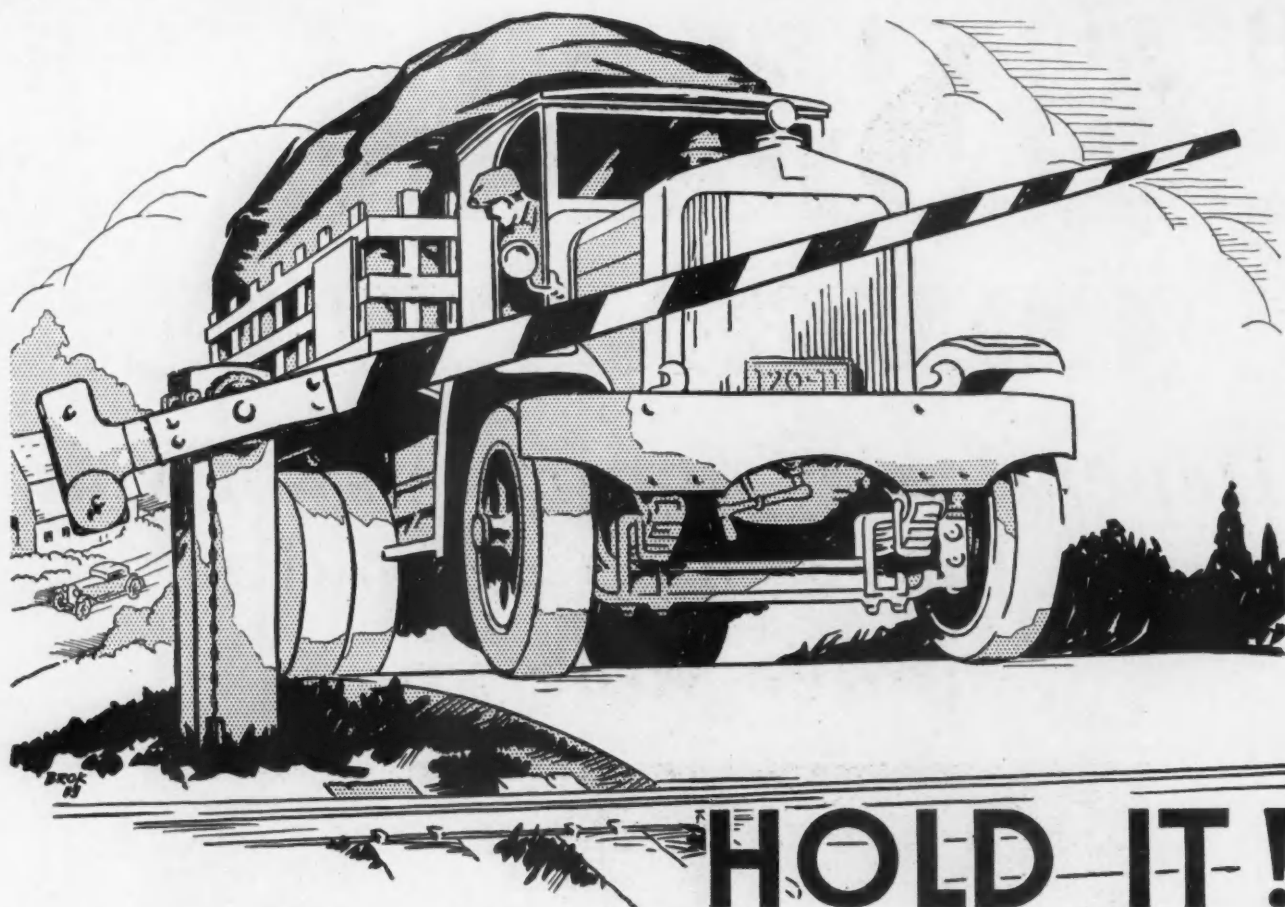
Continental truck engines are specifically designed to deliver the proper power for each purpose at a minimum cost. Look under your hood. That's where your profits lie.

Offices: Detroit, Mich., U. S. A.
The Largest Exclusive Motor



Factories: Detroit and Muskegon
Manufacturer in the World

Continental Motors Corporation



Few drivers or fleet owners realize that simply to hold a car at a traffic stop on a slight grade requires a brake pedal pressure of about 125 pounds.

Why not let the engine furnish this power?

B-K Vacuum Brake Boosters utilize the vacuum from the intake manifold to apply power to the brakes.

This saving of man power is a real economy because of the added efficiency due to elimination of fatigue.

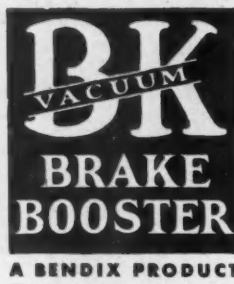
The positive control makes higher speeds pos-

sible and more trips per day.

Stopping, controlling, holding the heaviest truck with B-K Vacuum Brake Boosters is merely a matter of pedal depression rather than pedal pressure.

B-K Vacuum Brake Boosters are standard equipment on many of the leading trucks and buses.

They may be installed on all makes of trucks, buses, tractors and trailers, and passenger cars without changing the original brake equipment. Our distributor's franchise may be available in your territory.

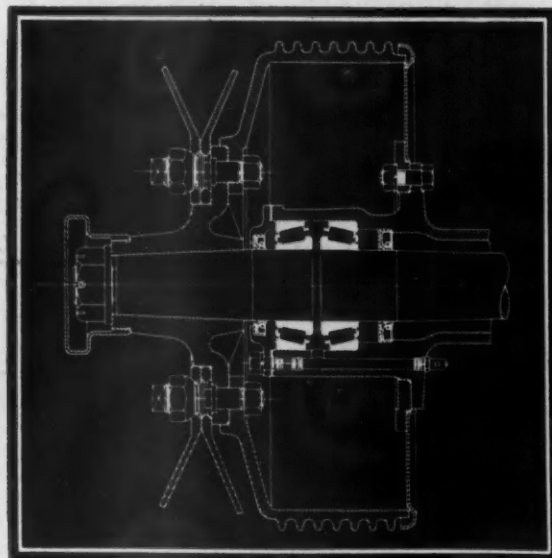


BRAGG-KLIESRATH CORPORATION

Queens Blvd. & Harold Ave., Long Island City, N. Y.

(Division of Bendix Aviation Corporation)

BEARING REQUIREMENTS FOR REAR WHEELS



Friction reduction is essential of course—but rear wheel bearings must also be capable of performing several other major duties well. They must afford proper support to the outer ends of the axles, give maximum rigidity and stability to the wheels and be able to carry radial, thrust, shock and torque loads singly or in combination.

If the axles are not correctly and adequately supported at the outer ends, there will be a tendency to axle deflection with bad

effects upon both the wheel and differential assembly.

If the wheels themselves are not properly supported and protected against thrust, radial loads and shocks they will soon get out of line, wobble, cause rapid tire and brake wear and jeopardize safety.

These diversified rear wheel bearing requirements call for a versatility of performance found only in the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken-made steel.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

RUGGED - POWERFUL - MODERN



The New International Heavy-Duty Line

Rated Capacities
from 2½ tons up

THE new International Heavy-Duty Trucks have good looks in every line—stamina in every part—unrivalled performance in every mile. They are powered and geared to pull into and out of anything the day's work offers. All have five speeds forward and two reverse.

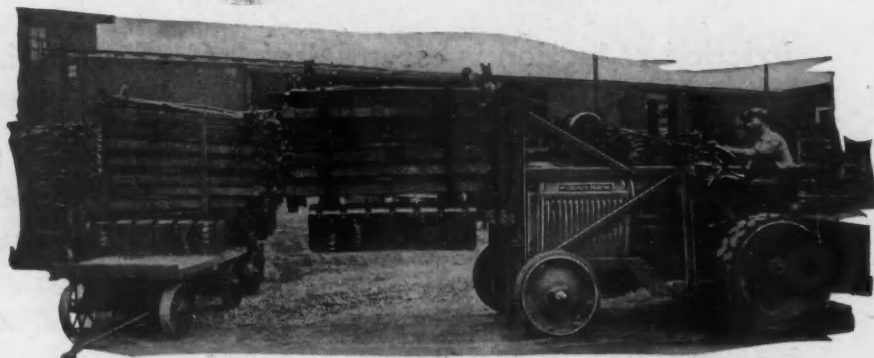
Under the new hood you'll find an unusually accessible heavy-duty engine, thoroughly in keeping with the truck's powerful appearance. Vibrationless, it develops great power

at low engine speed with surprising fuel economy. Reserve strength to match the engine's ample power has been built into every chassis member, into the clutch, transmission, drive shaft, rear axle assembly—and into the truck as a whole.

You'll want to get acquainted with this new line. See these trucks at any of the 180 Company-owned branches in the United States and Canada or at an International dealer's showroom. Write us for catalogs.

McCormick-Deering Industrial Tractors

MATERIAL handling costs are lowered by McCormick-Deering Industrial Tractors. These mobile-power units move materials fast. They put a great amount of work under control of one man. Their power is delivered three ways—through drawbar, belt, and power take-off. Their utility is increased a hundredfold by their flexibility which permits combining with an almost endless variety of special equipment. The nearest Company-owned branch



McCormick-Deering Industrial Tractor equipped with lifting device. One man loads and unloads his train of trailers, and transfers the material.

or a McCormick-Deering Industrial Tractor distributor or dealer will demonstrate McCormick-Deering Power at your request.

INTERNATIONAL HARVESTER COMPANY

606 S. Michigan Ave. OF AMERICA
(Incorporated)

Chicago, Illinois

McCORMICK-DEERING Industrial Tractors — INTERNATIONAL Trucks

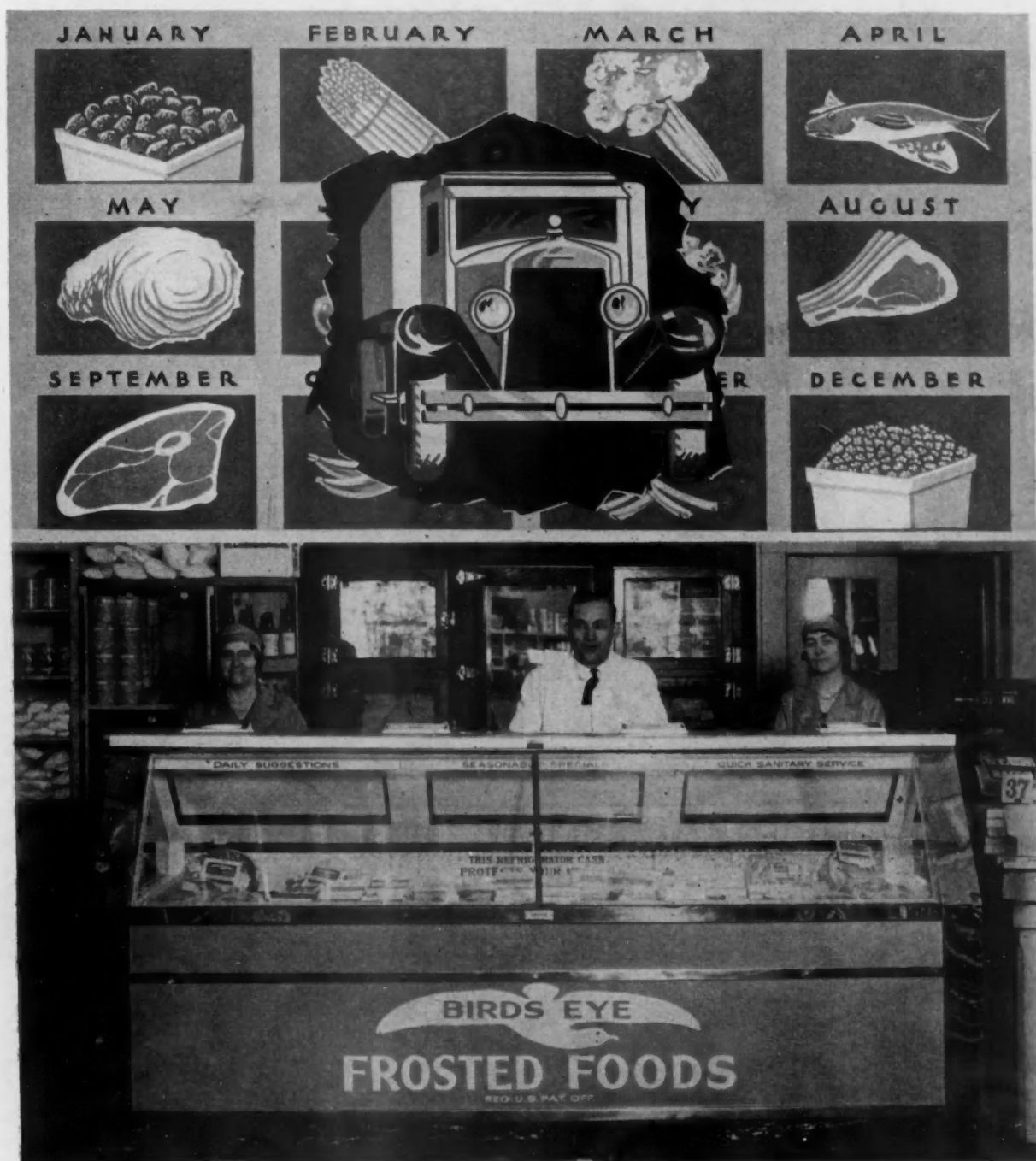
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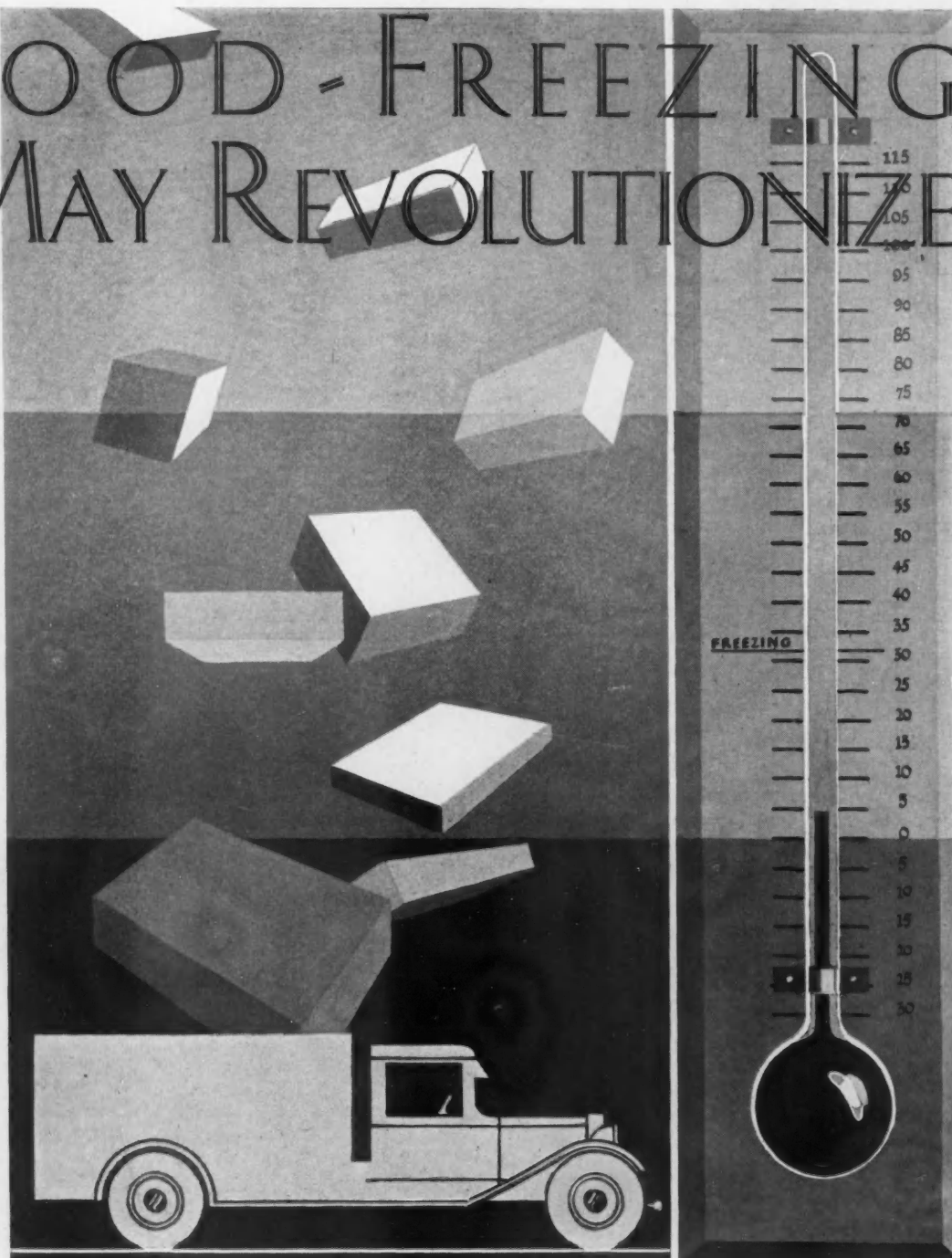
PHILADELPHIA, JULY, 1930

No. 5



TRUCKS are about to be summoned to assist the food industry in inaugurating a radical change in distribution of food products. A quick freezing process which makes it possible to forget the calendar and sell any chosen fruit or produce the year 'round, anywhere, and to transplant the services of the butcher to central packing plants is about to be presented to the public. The part the truck will take in distribution of these new frozen foods is explained in an article on the next page.

FOOD-FREEZING MAY REVOLUTIONIZE



CAUSE

Quick freezing process will change the distribution of meat and other perishable foods because: Meat will be cut into steaks, chops, etc., at the packing houses, trimmed and put up in packages ready for use. These packages will be sold over the counter by ordinary clerks. Products, once frozen, cannot be allowed to thaw in transit or storage. Advertised trade marks applied to packages of products, now hard to identify with brand names, will encourage shopping by telephone.

EFFECT

Large numbers of trucks with insulated or refrigerated bodies will be needed for both wholesale and retail distribution of frozen foods. Groceries and delicatessens adding frozen meat departments become prospects for new trucks with special bodies. Butchers and combination stores now selling meat will require new bodies or trucks, or both. Insulated bodies for frozen foods may be used to deliver fresh produce. Telephone orders will increase deliveries.

THE food industry is looking to the truck industry for help in solving a new problem in distribution involving handling of perishable products which make up three-fourths of our annual food bill. To the truck industry, as a reward, there is offered the inviting prospect of selling trucks by the thousands and making changes in many vehicles now in service.

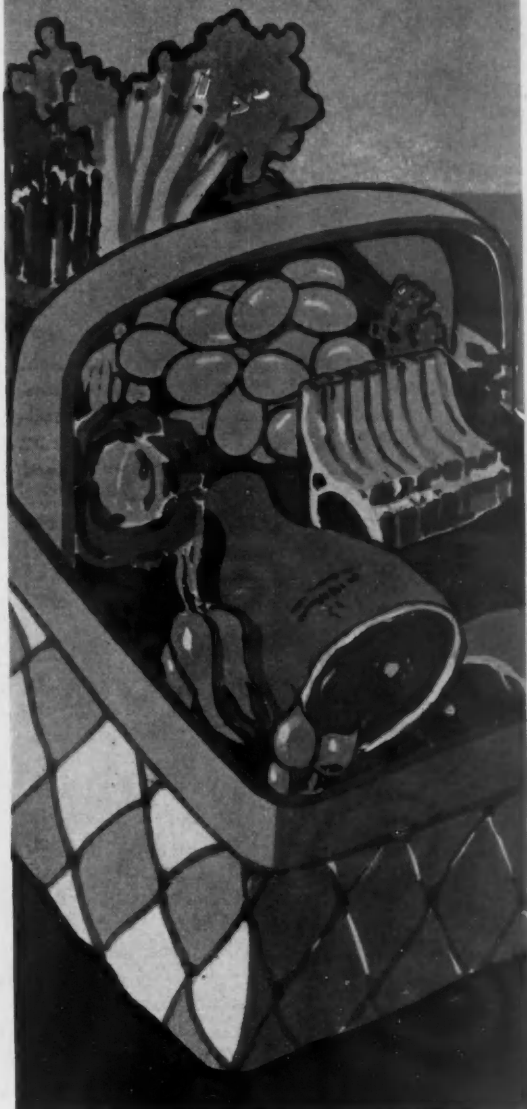
Commercial application of quick-freezing processes, by which perishable products are frozen at temperatures of the order of 50 degrees below zero, will bring about

July, 1930

The Commercial Car Journal
and Operation & Maintenance

038506
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DEVELOPMENT DISTRIBUTION



And Responsibility for Satisfactory
Retailing Will Be Placed More
Than Ever on the Sturdy Frame
of the Commercial Vehicle

By JAMES W. COTTRELL

Under the new plan meats will be dressed, cut, trimmed, wrapped or packaged and frozen at central packing plants. Fruits and vegetables will be packed and frozen at plants to be erected at producing centers.

Retailing of meat will involve none of the butcher's art. Packages of frozen meats, fruits and vegetables will be sold, over the counter, by the same clerks who now sell other products. Branding and advertising will be applied to selling cuts of meat, chops and roasts in the manner used with such success in marketing canned goods.

Under the proposed plan of distribution standards of quality will be uniform. Pork chops of a certain brand will be the same whether sold in Maine or Texas. Small steaks cut thin will bear one symbol, thick juicy steaks another. A housewife who is pleased with a certain steak can duplicate it the next week by a telephone order.

Costs are a bit uncertain during this preliminary stage

of development but many believe that frozen foods will cost no more, and perhaps much less, than ordinary foods. Freezing will bring about economies in distributing meat because bones and trimmings will be removed at the packing house, thus saving freight. Retailers need order only those cuts for which they have a ready sale and need not concern themselves about disposing of cuts for which they have little call. There will be no scraps, waste, or leavings to sell at reduced prices.

Contributing also to low prices is the fact that seasonable foods can be purchased at low prices at the height of the season and stored indefinitely until needed. For example, prices of deep sea fish at the docks vary tenfold during the season not because of change in quality but because of supply and demand, at the moment.

The Birdseye process, used by fisheries for some time for quick freezing fillets of fish, has been adapted by General Foods Corp. for

revolutionary changes in preparing and distributing perishable products, according to those now taking part in preliminary work. They predict that quick frozen perishable foods in trade-marked packages will be sold the year 'round throughout the country. Strawberries from Oregon will be sold at retail in New York for Christmas dinners, oysters gathered when they R in season will be readily available in the Middle West in July, as they now are on the seaboard in October. A T-bone steak, cut and trimmed in Chicago, may help a Miami housewife to entertain unexpected company for dinner.



FOOD-FREEZING DEVELOPMENT MAY REVOLUTIONIZE DISTRIBUTION

meats, fruit and vegetables. It is characterized by use of cooling coils or chilled metal plates both above and below food being frozen. Unlike fillets, which are frozen and then put up in packages, frosted foods sold by General Foods Corp., are packed in cardboard boxes, or cartons, before freezing. The machines have double metal conveyors arranged one above the other and extending through long refrigerated compartments. Packages are placed upon the lower conveyors and passed through the compartments. Intensely cold metal in both conveyors in contact with the cartons brings about very rapid freezing and when food reaches the end of the compartment it is ready for storage or shipment.

Other processes are in use for freezing foods in lots or packages for retail selling. Cuts of meat are wrapped in transparent cellulose without boxes by several companies. At least one large meat packer is offering frozen meat cuts in metal pails for restaurant and hotel trade.

Before this new era in marketing of food is brought to

pass many problems of the first magnitude must be solved. The first question is that of public acceptance, another that of equipment of retail outlets, and last but not least, transportation.

Advocates of quick freezing take particular pains to distinguish between quick frozen and cold storage products. They realize that success depends upon establishing in the minds of their customers the idea that quick frozen foods are quality merchandise.

Seeking an answer to the question of public acceptance of frozen foods, General Foods Corp. inaugurated an experiment in selling these products in Springfield, Mass., on March 6 last. Opening days brought large crowds and heavy sales, as expected. But the real issue was whether or not sales would continue after novelty appeal died out. Sales increased rapidly from week to week and are still increasing. A careful check of sales reveals a large percentage of repeat business. In addition to the frozen foods originally offered trial lots of

Frosted foods have been on sale in Springfield, Mass., since March 6 in a test of public acceptance of these products. Sales increased steadily, with a high percentage of repeat business, and are still mounting

different products have been placed on sale. Stores in Springfield sold steaks, chops, roasts, pork sausage, berries from the west coast, spinach, fish, oysters, poultry—cleaned and dressed ready to cook—and other products. Customers expressing a liking for certain frozen foods have asked for other varieties.

Several large meat packers have tried out frozen meats in the form of steaks, chops, roasts and stewing meats, all packaged and labeled. Selected dealers have been given the opportunity to test public approval of the new offerings. There is every reason to believe that more than one large packer will soon launch the new products on a large scale.

The whole food distributing organization of this country cannot be changed overnight. During the transition period many temporary measures will, of necessity, be adopted. But in all stages of development, from the present until frozen foods are firmly and widely established, trucks will pay an important part.

Let us look ahead to see how the truck will fit into this new scheme of food supply. The first job of the truck will be that of delivering frozen foods from warehouses to retailers. For short trips an insulated body will serve, but for long routes some sort of refrigeration will be required. The service is similar to that of hauling ice cream and it can be assumed that DryIce and mechanical refrigeration will be employed to keep desired temperatures inside the bodies.

A change in distribution to retailers is predicted by one executive. He foresees that refrigerator trucks driven by driver-salesmen will cover routes, making spot deliveries to retailers as they go. Trips by order-taking salesmen will be eliminated by the new delivery service.

Retail stores require special equip-

ment for storing and displaying frozen foods. Ordinary store cabinets are designed to preserve fresh meat and vegetables and they maintain a temperature above freezing. As quick frozen foods must be kept frozen until delivered to customer special low temperature cabinets are needed. Surveys of the field show that only a small percentage of retail food outlets have refrigerated cabinets at all and the task of introducing the new products to storekeepers will, therefore, be no small undertaking.

Many of the cabinets designed for new frozen foods comprise a display space at the top and storage capacity below. As it is expected that customers will buy by brand name or by reference to products displayed the products actually shown will be samples and sales will be made from storage compartments.

The problem of delivery to customers has been given less attention than some of the others arising in connection with marketing frozen foods. Special containers, similar to those for ice cream, will be used shortly by one concern. Stores in Springfield where frozen foods are being sold operate on the cash-and-carry plan and purchases are wrapped in corrugated containers and are not refrigerated. If purchases are to be delivered by truck, insulated bodies will be required, in all probability. Refrigeration may be desirable in hot weather.

Much hasty experimenting and developing is now under way in body plants and factories making mechanical refrigerators. Experience in building bodies for handling ice cream is helpful but there are a lot of new problems to overcome in designing a body to handle frozen foods. Overshadowing all of the body design research is the question of production and of price. If frozen foods go over with the public in a big way, body plants will be taxed to capacity to turn out special bodies fast enough, according to one engineer. Big production should bring about moderate prices, but this can only be accomplished by devising a body which lends itself to quantity production methods.

The truck industry can be depended upon to keep pace with developments in this field. There seems every reason to believe that body builders and truck makers will be ready by the time food-freezing equipment and retail store cabinets are developed and produced in large quantities.

The fact that frozen meats will, in all probability, be sold by many retail establishments not now selling meat opens up a new field of prospects for truck dealers. Delicatessen stores, groceries and fruit shops probably will sell the new frozen foods. Many retail establishments, not having sufficient volume of business to justify employment of a butcher, can sell frozen products over the counter. All such establishments may have need of motor delivery, a new kind of motor delivery, in fact.

Meat stores will not be chased out of business by the new products. With established trade they will sell the major portion of meat, as they have in the past. But they will need something new in delivery equipment, new bodies or new trucks or both.

With prospects for selling new trucks to old customers and for other sales to retailers not owning delivery equipment, truck dealers have a considerable interest in developments in the field of frozen food distribution. Some of their customers are likely to be asking pointed questions shortly. Makers of electric refrigerators for homes are advertising frozen food storage compartments; a lot of word-of-mouth advertising of frozen



Cuts of meat treated by quick freezing may be cooked without thawing, berries must be thawed. Packages shown are similar to those on sale in chain stores in Springfield, Mass.

foods is being done by travelers for some of the large food manufacturers; one company has a sample frozen food store to show to its customers, but not the public. Women's magazines are talking about the new foods. Important developments are in the wind.

Knowledge of possibilities of frozen foods lends new significance to certain events. For example, one of a large chain of 5 and 10 cent stores opened a meat department a few weeks ago. Cuts of meat are displayed on trays in refrigerated cabinets, ready for sale. Glass windows in a storage refrigerator reveal butchers cutting up meat into steak, chops, roasts, etc. They are not behind the counter but in another room. So far as the customer is concerned they might as well be miles away. It requires no great powers of imagination to see this department converted into an outlet for frozen foods.

Keep abreast of all news and all developments in this field if you care about selling trucks.

SERVICING ALL MAKES IS

CONFIDES



A. F. SMITH

Service Manager

Federal Motor Truck Corp.
Atlanta Georgia

TO V. L. TRAYLOR

COMBINATIONS are no new things; we have had them for a long time. There was Adam and Eve, David and Jonathan, Johnson and Boswell, and at present, Mutt and Jeff, Amos 'n' Andy, ham and eggs, and a host of other things as closely connected as the Siamese Twins. To this list the truck dealer should add another inseparable pair, "Servicing and Selling." The Federal Motor Truck Corp. has proved this to be a winning combination in its branch at Atlanta, Ga. This combination has literally opened vaults wherein was stored a wealth of fair and honest profits. The words "servicing and selling" have been to Nat Thornton, the manager of the Atlanta branch, what "Open Sesame" was to Ali Baba in the tale of the Forty Thieves.

When the branch was first opened on W. Peachtree St., Mr. Thornton very wisely chose A. F. Smith for the position of service manager. Mr. Smith was a man of ideas as well as ability. He had owned and operated a garage for several years in Atlanta and had established a large following



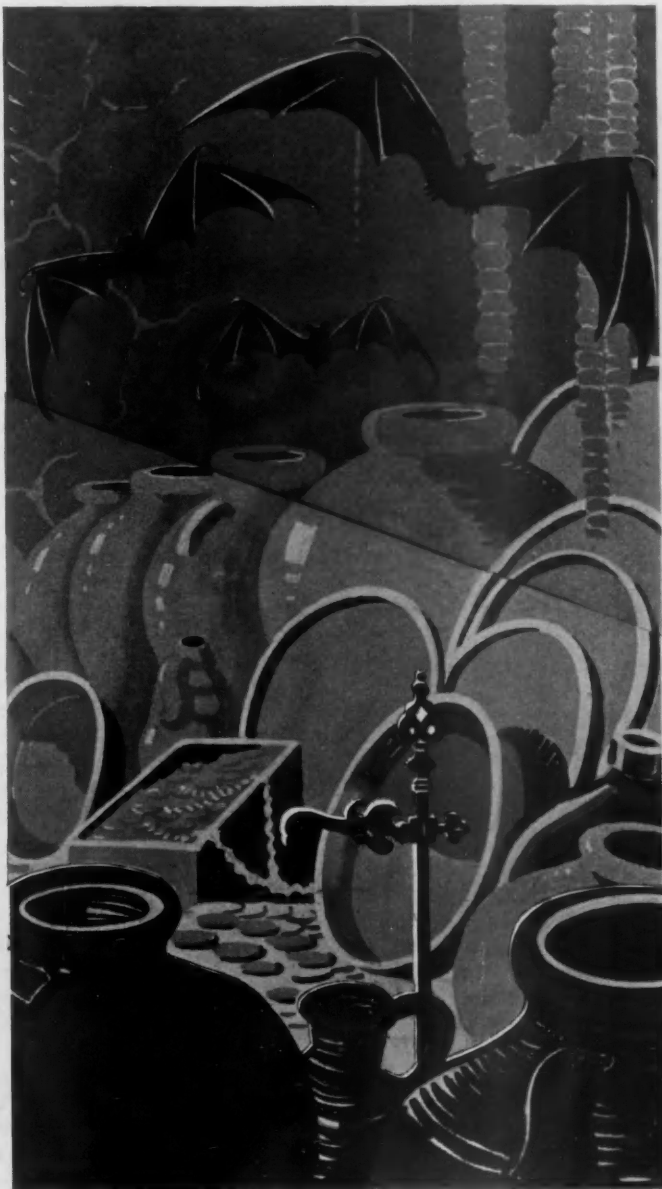
MAKE MONEY FROM

among passenger car and truck owners. These owners possessed cars of various makes and Mr. Smith was naturally reluctant to give them up and confine his services to one make of truck. Many of the mechanics had regular customers also, and Mr. Thornton decided to make an effort to transfer to the new branch what-

ever good will and confidence his mechanics had won in other places.

He accomplished this by opening his service department to all makes of trucks and making a sincere effort to get the business. The fact that there was no garage in Atlanta making a specialty of servicing trucks was a strong point in his favor from

“OPEN SESAME” TO PROFITS



MAINTENANCE

the beginning. Mr. Thornton reasoned that this would be an excellent policy for his service department and hoped that it would indirectly aid in his sales department. This hope was realized to an extent that exceeded his most optimistic expectations.

Not wishing to intrude into any field that might not be entirely ethical, Mr. Smith at first went out to seek the “orphans,” a name he gives to those trucks whose manufacturer has gone out of business or has no local house to offer service. In most cases these “orphan” trucks were more trouble to service than were ordinary

Ali Baba Had No Copyright on the Combination to the Golden Treasury, According to A. F. Smith, Who Services All Makes of Trucks and Makes It Pay

trucks, and their owners were glad to give the Federal branch the business and grateful for the service. They showed this appreciation in almost every instance by buying Federals when the “orphan” trucks wore out. Whatever extra trouble that had been caused by servicing these odd trucks was more than recompensed by the sales resulting from this service.

Another opportunity for servicing all makes of trucks presented itself in the case of a fleet owner whose trucks were not all of the same make. It was far more convenient for this fleet owner to have all his trucks serviced in the same shop, since it simplified the entire process, standardized prices and made the service more intimate and easier to obtain.

The patronage of such customers was especially welcome to the service manager also, as the accounts were larger and there was a more steady demand for services. If the fleet owner owned a preponderance of Federal trucks, he invariably gave the Federal service department the business of servicing all his trucks.

Another distinct departure from the ordinary policy of the service department of a truck dealer was to service the passenger cars of those who were using the Federal truck service. They offered this service as a courtesy to their customers, and although regular prices were charged for such services, it was appreciated by the customers who availed themselves of this service. The work done on the passenger car of a fleet owner was naturally observed more closely by him than the work done on his trucks, and the Federal people in this way became much more intimately and favorably associated with him than they otherwise would have become. Work on passenger cars was very rarely urgent and in many instances consisted of jobs that



There is no distinction in this shop where operators of all makes of trucks are induced to bring their trucks for service

SERVICING ALL MAKES IS "OPEN SESAME" TO PROFITS

could be done at the convenience of the service department. This provided a reserve source of work that was highly appreciated by the mechanics, who worked more regularly and were less affected by business depression than the mechanics in other service departments.

The mechanics in this shop, being permitted to work on all the various makes of trucks, and passenger cars as well, quite naturally became more familiar with their work than they would have been if they had confined their efforts to Federal trucks alone.

Upon being queried as to whether or not this policy gave his mechanics a broader and more comprehensive outlook upon their trade, Mr. Smith gave a very illuminating answer.

"It does, absolutely," he answered positively and with evident conviction of the truth of his assertion.

Then he went on to explain at length how the mechanics in his department came into contact with all new developments in design and construction of chassis parts and

appliances and became thoroughly familiar with them by actually handling them in their work. Knowing the structure and performance of all the different makes, they are better judges of truck values and have a clearer conception of the functioning of the integral parts.

In all this servicing the same price was charged that would have been charged in any other garage catering to all makes of trucks. There is naturally a profit from this, which is about one-tenth of all the work done in the service department. The Federal, being an "assembled" truck, the parts department is able to supply immediately whatever demands are placed upon it. This gives the service department an advantage over the independent garage from a standpoint of actual profit and in the speed of rendering service.

Mr. Smith, in strict observance of the ethics of his trade, is careful to solicit business only in ways and places that are unquestionably fair to his competitors. "Orphan" trucks are, of course, an open field for all.

All other truck dealers in Atlanta restrict their servicing to the makes they sell, with a possible rare exception of an occasional truck which they service now and then solely as a courtesy to the owner of a fleet of their trucks. Some dealers will not even do this. By offering to the owner of a fleet of trucks of various makes, a unified service, Mr. Smith can bid for his business in a manner that is entirely legitimate. Therefore, from a standpoint of servicing alone, the policy of servicing other makes of trucks is one that will show a handsome profit for the dealer in his service department. This profit alone is sufficient to merit the adoption and continuation of such a policy, but it is only half the profit. The other profit is the one that is the direct result of sales brought about by the help of the service department.

Mr. Smith recalled from memory at least 25 sales of new Federal trucks that were made possible because of the influence of the service department. He illustrated by citing the case of the orphan trucks he had serviced. After he had serviced these trucks until they wore out, he had in every instance replaced them with Federals. The owners of these trucks were indebted to the Federal Corp. for service that might otherwise have been very inconvenient, so they were naturally inclined to buy from a Federal salesman. An example was given by Mr. Smith of a funeral director who had allowed him to service his trucks while he had operated an independent garage. When Mr. Smith joined the Federal Corp. he continued to service the trucks of the funeral director.

After rendering efficient service to these orphan trucks for two years, Mr. Smith sold two Federals to replace two of the older ones and has since that time replaced others. The orphan trucks alone, however, were not the only ones to be replaced by Federals.

Other trucks were replaced by Federals because, since the Federal Corp. was servicing these trucks, it was the first to become aware of the prospective sale. The service manager watched these trucks as they were repaired from time to time and knew probably before the owner himself when they were worn out and ready to be replaced by new ones. He not only knew when the trucks were worn out, but he knew the type of truck that was being used and whether or not that type had given satisfactory service. He knew what special equipment was needed and for what purpose it was needed. He knew what points for the salesman to present that would appeal most to the prospective purchaser.

Having all these advantages, the Federal salesman had a tremendous lead over competitors, and he invariably made the sale. His sales talk was more convincing, since he was more familiar with the customer's needs. He could not fail to win the customer's confidence and to impress him with the fact

TURN TO PAGE 80, PLEASE

A PEEK INTO THE FUTURE



A SHIFT into first speed while coasting at 40 m.p.h. and starting in high gear without harming the clutch are made possible by two devices now undergoing tests in that court of last resort for mechanical inventions—the users.

*The Commercial Car Journal
and Operation & Maintenance*

Engineers Are Trying Out Transmissions With Easier Shifts, Mufflers on Intakes and Superchargers on Engines

Who wants to shift into first at 40 or to start in high? "Nobody." Do not be too sure. Suppose you are coasting a speed truck down a grade with a sharp uphill turn at the bottom. Would you get into the climb a bit quicker if you could engage first while swooping down the hill? But what is more important is the fact that a gadget which makes such a shift possible makes all shifts easy.

A glorified ratchet in the drive line which disengages propeller shaft from driveshaft of the transmission whenever the "truck is going faster than the engine," is the device which brings about this effortless gearshifting. In England, where high license fees and dear gasoline bring about use of small engines and much gearshifting, these devices are designated "free-wheelers." Acting like the coaster brake of bicycle days, except that they do not brake but do coast, they make coasting automatic whenever the accelerator is released.

Gearshifting is made easy because the axle on longer drives the transmission gears and with clutch released any shift can be made up or down at any vehicle speed. Much is being said about easy gearshifting as a sales advantage for passenger cars, but considering the fact that 5, 7 and 12 speeds are common, and the great frequency of gear changes on modern trucks, some engineers predict a bright future for a free-wheel device which has no mechanical troubles.

The Daimler Company of England recently introduced a hydraulic clutch which makes it possible to start in high gear, like a gas-electric, by pushing the accelerator to the floor. Driving and driven members embody rows of cup-shaped depressions through which oil circulates in a circular path. Slip is 100 per cent at idling speed and only 2 per cent on the road under ordinary load conditions. Such a device does not take the place of transmission gearing and the usual number of speeds is provided. Shifting of gears is accomplished by a separate, and smaller, clutch placed between the hydraulic mechanism and the regular transmission.

Modern engines are quiet, but there is a demand

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July, 1930

INDUSTRY AIMS AT FALL TRADE SPURT



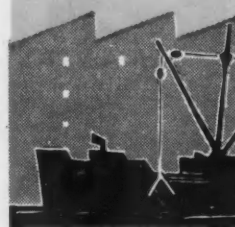
Quiet Summer is Seen But Revival in Autumn is Expected to Hold the Domestic Sales Loss for the Year to a Small 12 Per Cent. Depression Affects Industry Slightly in Latter Months of the First Half

By GEORGE T. HOOK

DURING the early rounds of this year the truck industry made a valiant showing against the business depression. It stood up like a veteran against the terrific left and right hooks, uppercuts and haymakers that sent other industries into a corner battered and gasping for breath. It side-stepped with amazing agility blows that sped on and knocked other industries for sundry rows of the rustic conveniences which Chic Sale, the master builder, elevated to literary fame. The salvos of applause that arose from the interested spectators were cheery and sincere. Even we so-called experts drove our frenzied typewriters into a state of hoarseness crying out the gladsome tidings. But we weren't kidding ourselves. We were merely being opportunists; yelling while the yelling was good. After all, nobody knows better than your so-called expert that when a business depression really hits its stride, it begins to resort to foul tactics, and there's no industry that can take a decision in the face of rabbit punches, knees into the abdomen, eye-thumbing and even flying mares.

So, when the March, April, May and June rounds were fought, the course of the battle which statisticians plotted showed that in the first six rounds of the year the depression had fouled the truck business for a 12 per cent loss in domestic sales as compared with the same period of 1929; a loss of 31 per cent in export sales, and a 26 per cent loss in production.

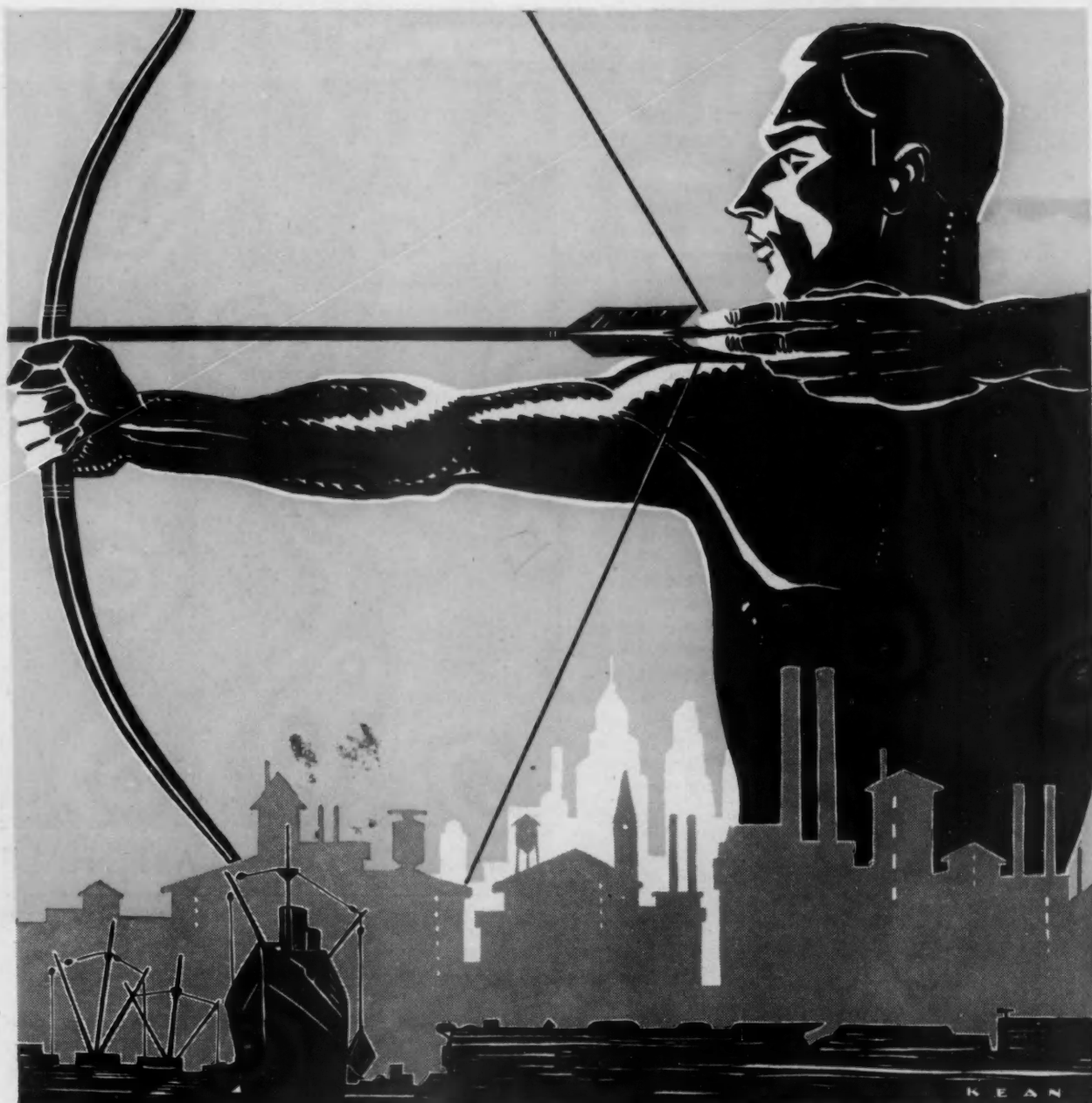
Now, while this in itself isn't anything to write home about, it is noteworthy that while the industry at the moment is slightly winded and bruised, it isn't groggily hanging on the ropes. It is, judging



Domestic and Foreign Sales and Production Comparisons for First Six Months of

	1926	1927	1928	1929	*1930	Per Cent Loss 1930 Over 1929	Per Cent Gain 1930 Over 1928
Ford and Chevrolet	129,464	125,029	82,526	188,704	174,000	7.4	111.0
All Other Makers	69,995	63,111	68,182	74,294	56,000	23.0	-17.6
Total Domestic Sales	199,459	188,140	150,708	262,998	230,000	12.2	52.6
American Foreign Sales	82,249	98,463	82,821	188,288	130,000	30.8	57.0
Total Domestic and Foreign Sales..	281,708	286,603	233,529	451,286	360,000	20.0	54.0
Production, U. S. and Canada	294,376	297,269	256,187	488,261	362,000	25.8	41.3

* Estimated.



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Of course, the foregoing observations apply to the truck industry as a whole. But the truck business, as some factory executives will frequently remind you, is made up of businesses. There is, for instance, the light-duty truck business and the medium and heavy-duty truck business. The former is preponderantly represented by the champion lightweights, Ford and Chevrolet. The other classes are ably championed by all other manufacturers. If this division of interest is applied to the results sustained in the first half of this year, there is a significant disparity in the punishment absorbed by each. The

truth is that the lightweights stood the gaff in the first half of the 1930 domestic bout, while the so-called heavyweights wilted and wound up the first period looking, as the sports writers say, merely the hulks of their former selves. In plain figures, Ford and Chevrolet in the first six months sold an estimated total of 174,000 units domestically, which was 7.4 per cent under 1929 but 111 per cent above 1928. All the other manufacturers, however, sold approximately 56,000 units, which was 23 per cent under 1929 and 17.6 per cent under 1928. In fact, this total of 56,000 was even under the 1926 and 1927 totals. Which is unquestionable proof, if you want any, that as a whole makers other than Ford and Chevrolet have so far this year taken what may be termed a severe lacing. The table which appears somewhere in this vicinity tells a five-year story in a few figures.

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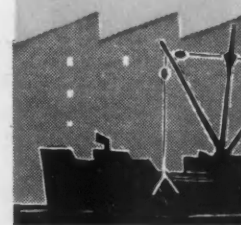
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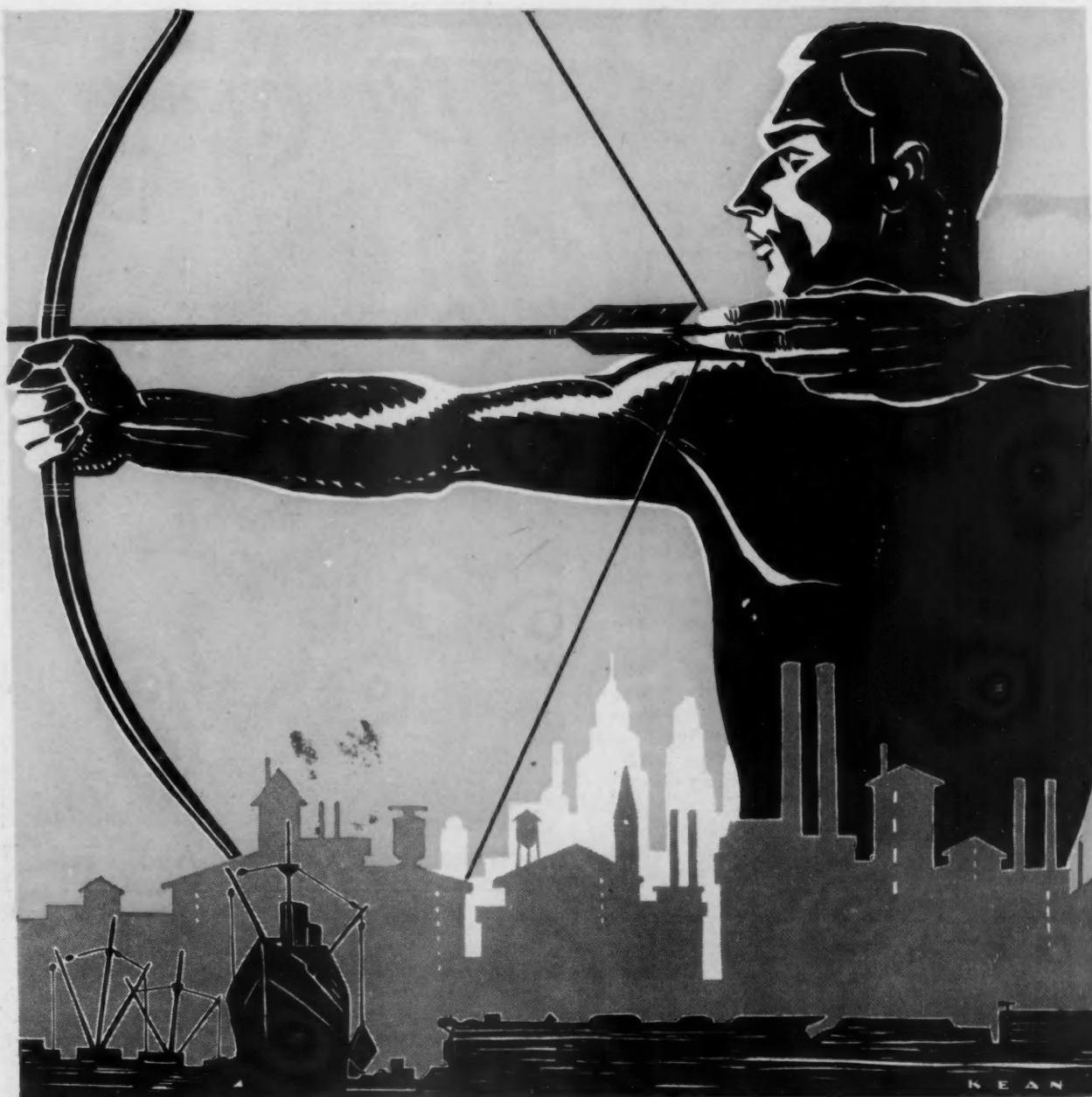
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Now, while the domestic truck market as a whole was set back in the first half of this year as com-

pared with 1929, the national sales map was not without some pins from whose tops floated blue ribbons. There were, in fact, 18 states that registered sales gains. Following is the honor roll: Maine, New Hampshire, Maryland, Virginia, West Virginia, Florida, Wisconsin, Kentucky, Tennessee, Alabama, Mississippi, Minnesota, Missouri, South Dakota, Idaho, Wyoming, Colorado and Utah.

The most heartrending disappointment thus far in 1930 has been the export market for trucks. Before last October administered an opiate to general business, the leaders in the truck industry were getting blisters on their hands from rubbing them in happy anticipation of what the export market had in store. The foreign field at that time was considered a push-over for commercial vehicles, not only because prices were right, but because in mechanical design and in appearance the American products put their foreign competitors far in the shade, and because most companies had spent considerable time, effort and money in the building of satisfactory dealer representation abroad. The eggs were all ready but the depression got to them before the hen and in place of life gave us the makings of an egg-nog in which to drown our disappointment.

So that instead of a skyrocket, truck exports in the first half of this year proved to be a squib that hissed out a 31 per cent flop from the 1929 record of 188,288 units. And since this 188,288 total represented a gain of 127 per cent over the total for the first half of 1928, the importance attained by the export market needs no emphasis. It is true, of course, that exports for the first half of this year are still 57 per cent better than for the same period of 1928. This is a fragrant rose to sniff at, but there's a bee hidden among the petals. During the early months of 1928 Ford was still groping about with the Model A and Model AA. Mighty few Ford commercial vehicles took ocean cruises in those months. In the first half of this year, however, Ford's vigor is not to be questioned and the bulk of the 130,000 units exported must be attributed to Ford and Chevrolet. This leaves the rest of the industry with a small bag holding about the same amount of exports as in 1928. Perhaps just slightly more, but certainly far from a 57 per cent increase.

This is a drab picture of the export market, but the pigments are natural and not dulled by personal opinions. The industry's leaders admit the export market is not what it was to have been. Nor is the vista of the next six months a very enthralling one. The latest reports of the Department of Commerce show that the world depression continues, with only a few countries revealing signs of partial improvement.

So far as the next six months are concerned, the domestic truck market wears a more silvery lining than the export market. But its brilliance is not likely to be as dazzling as the same period of last year. In fact, the high officials of factories seem

WHAT FACTORY EXECUTIVES



THINK OF THE LAST HALF

to be fairly agreed that the second half of this year will compare with the second half of 1929 in the same ratio as the first half compared with the first half of 1929. This expectation, if realized, would mean a drop in sales of 12 per cent for the second half, which would enable the industry to show a similar percentage decrease for the entire year. That is, domestic sales for 1930 would be 12 per cent under the 1929 total. And if you'll just take the trouble to look around at other industries and see the maimed, the halt and the blind, you'll agree that a drop of only 12 per cent in a badly bent year like 1930 would be a masterly achievement.

After studying the past six months for facts that might throw kindly light on future prospects, Walter S. Graves, Dodge truck sales manager, made the following pertinent observation: "It is a noteworthy fact that volume during the first half of the year has come largely from individual accounts rather than from fleet operators. Individual accounts should continue to produce business in undiminished quantities, while at the same time it is logical to assume that fleet owners will of necessity begin to buy during the last half of the year to maintain the standard of their service to the public." Mr. Graves bases his reasoning upon the large number of inquiries being received from fleet operators regarding equipment adaptable to their business.

This is a reasonable expectation, but exactly when the fruit will be ready for plucking is another matter. The testimony of economists is a bit confusing when the future prospects of American business are under observation. Some economists see the bottom of the down-swing reached, and take

this for an encouraging sign. Doubtless, on the premise that a pendulum can go only so far on the downward swing and thereafter must go up. Which is similar to the reasoning that a dog can run into the woods only half way; thereafter he is running out. This logic meets with some embarrassment when one counters that a pendulum may rest a long time at the bottom of its swing if the clock runs down, and a dog may lose his way in the forest and be a long time finding his way out. But business has not completely run down, nor has it gone wholly to the dogs, so the logic may be considered in good standing. Still other economists perceive a tendency to even lower commodity prices. But no matter where the economists place the pendulum of business they all seem to be agreed that the dog will be in the woods all summer and won't be on his way out until fall.

Summer dullness, of course, is nothing new to the truck industry, so that it will be well content if the remainder of the economists' prediction comes true. "Out of the trenches by fall" appears to be a pretty general expectation, and if it is realized it will be a significant indication that business has cast off the doldrums in preparation for a march over the top.

Factory executives also seem to be of the opinion that autumn will not only bring a fall of leaves but also a fall of orders into dealers' laps, not, however, without the exertion of some effort on the part of the dealers. The following are some of their comments:

**H. C. Keenan, vice-president,
Sterling Motor Truck Co.**

"Anticipate steady truck sales during last half on par or better than first half. Believe bottom of buying slump has been reached and demand will reach normal trend by fall."

**L. A. Miller, president,
Willys-Overland, Inc.**

"Registration Willys-Overland commercial vehicles 39 per cent ahead of last year. We feel opportunities for truck business splendid in last half 1930 and feel confident truck sales will at least equal and probably exceed first half of 1930."

**Albert Staab, sales manager,
LeBlond-Schacht Truck Co.**

"From every indication we believe the last half of 1930 will compare very favorably with the first half in sales volume. We have recently made a survey among our branches and dealers and they all report the outlook for future business encouraging."

**M. L. Pulcher, president,
Federal Motor Truck Co.**

"Our business for the first six months was fairly good. We have no complaint whatsoever to offer and we are looking forward to a better six months. We believe as the year progresses that business will continually move toward the better, and we believe that by the end of this year and the beginning of 1931 we will be somewhere back near a normal basis."

**W. D. Graves, truck sales manager,
Dodge Brothers Corp.**

In addition to the observation quoted above, Mr. Graves wired the following: "I feel safe saying that volume truck business for balance of this year will retain at least as favorable ratio toward business for same period of a year ago as it has during first six months. There is marked improvement in interest being shown by large oil companies. Food products fleet owners and those lines of business supplying necessities of life have continued and doubtless will continue their purchases of trucks to adequately maintain their equipment at standards to which they are accustomed. There should be a marked increase for large trucks for remainder of year."

**Martin A. O'Mara, president,
Brockway-Indiana**

"Brockway-Indiana sales and deliveries for the first half of 1930 will be about 10 per cent under 1929 in number of units. This, despite the fact that we have a drop of approximately 51 per cent in our export sales in countries throughout the world, which represented a very substantial part of our business prior to this time. This new business has come through an entirely new clientele, because of the introduction of the new models and a very aggressive sales campaign throughout the Brockway-Indiana organization. Our volume could have been considerably increased during the first six months of this year had we been satisfied to force a larger volume of business from our export distributors, but this is against our policy.

"It is our opinion that the months of July and August will not be very promising, but we believe that starting along in September we should be-

gin to receive an increase in business which will continue until the end of the year, and we hope to be able to finish 1930 with a volume closely approximating 1929."

**Carl Parker, ass't sales manager,
Reo Motor Car Co.**

"In this kind of a market it is rather audacious for a sales executive to make a serious attempt to publicly prognosticate lest he be misunderstood. On one hand there are those who would discount his optimism by claiming he is whistling up his courage, on the other hand, he better quit his job if he is going to be pessimistic. However, there are a few points not to be lost sight of, and it does not seem to be that a man is falsely courageous when he builds his confidence in the future upon them. They are:

"1. Gasoline sales nationally show about a 20 per cent increase in the first four months of 1930, compared to the same period in 1929. This is encouraging, since it indicated there was at least no loss in mileage production, which means that the need for replacement has not been lessened.

"2. Due to the tendency of people in buying smaller quantities, but buying more frequently, it has been necessary for a large number of mercantile houses to actually increase the number of delivery trucks.

"3. *Retail Ledger* in its June issue shows a series of charts that indicate that both retail and general trade will improve in the balance of 1930. While people are growing tired of charts and mapped prognostications, *Retail Ledger* has a reputation of not being far wrong in its prophecies.

"4. Transportation wears out like shoes. They can be half-soled and heeled, but it is only a matter of time when replacement is necessary.

"5. Whether there is going to be more business or less business between now and Jan. 1 involves individual effort. The reader of these pages of comment must accept the situation as a battle royal, and exert more effort per sale. Whatever the total volume of business is to be, it will go to those who make the best effort. The ranks are pretty well thinned out of those who are foolish enough to spoil good business for others by taking it at a loss."

INDUSTRY AIMS AT FALL TRADE SPURT

pared with 1929, the national sales map was not without some pins from whose tops floated blue ribbons. There were, in fact, 18 states that registered sales gains. Following is the honor roll: Maine, New Hampshire, Maryland, Virginia, West Virginia, Florida, Wisconsin, Kentucky, Tennessee, Alabama, Mississippi, Minnesota, Missouri, South Dakota, Idaho, Wyoming, Colorado and Utah.

The most heartrending disappointment thus far in 1930 has been the export market for trucks. Before last October administered an opiate to general business, the leaders in the truck industry were getting blisters on their hands from rubbing them in happy anticipation of what the export market had in store. The foreign field at that time was considered a push-over for commercial vehicles, not only because prices were right, but because in mechanical design and in appearance the American products put their foreign competitors far in the shade, and because most companies had spent considerable time, effort and money in the building of satisfactory dealer representation abroad. The eggs were all ready but the depression got to them before the hen and in place of life gave us the makings of an egg-nog in which to drown our disappointment.

So that instead of a skyrocket, truck exports in the first half of this year proved to be a squib that hissed out a 31 per cent flop from the 1929 record of 188,288 units. And since this 188,288 total represented a gain of 127 per cent over the total for the first half of 1928, the importance attained by the export market needs no emphasis. It is true, of course, that exports for the first half of this year are still 57 per cent better than for the same period of 1928. This is a fragrant rose to sniff at, but there's a bee hidden among the petals. During the early months of 1928 Ford was still groping about with the Model A and Model AA. Mighty few Ford commercial vehicles took ocean cruises in those months. In the first half of this year, however, Ford's vigor is not to be questioned and the bulk of the 130,000 units exported must be attributed to Ford and Chevrolet. This leaves the rest of the industry with a small bag holding about the same amount of exports as in 1928. Perhaps just slightly more, but certainly far from a 57 per cent increase.

This is a drab picture of the export market, but the pigments are natural and not dulled by personal opinions. The industry's leaders admit the export market is not what it was to have been. Nor is the vista of the next six months a very enthralling one. The latest reports of the Department of Commerce show that the world depression continues, with only a few countries revealing signs of partial improvement.

So far as the next six months are concerned, the domestic truck market wears a more silvery lining than the export market. But its brilliance is not likely to be as dazzling as the same period of last year. In fact, the high officials of factories seem

WHAT FACTORY EXECUTIVES



THINK OF THE LAST HALF

to be fairly agreed that the second half of this year will compare with the second half of 1929 in the same ratio as the first half compared with the first half of 1929. This expectation, if realized, would mean a drop in sales of 12 per cent for the second half, which would enable the industry to show a similar percentage decrease for the entire year. That is, domestic sales for 1930 would be 12 per cent under the 1929 total. And if you'll just take the trouble to look around at other industries and see the maimed, the halt and the blind, you'll agree that a drop of only 12 per cent in a badly bent year like 1930 would be a masterly achievement.

After studying the past six months for facts that might throw kindly light on future prospects, Walter S. Graves, Dodge truck sales manager, made the following pertinent observation: "It is a noteworthy fact that volume during the first half of the year has come largely from individual accounts rather than from fleet operators. Individual accounts should continue to produce business in undiminished quantities, while at the same time it is logical to assume that fleet owners will of necessity begin to buy during the last half of the year to maintain the standard of their service to the public." Mr. Graves bases his reasoning upon the large number of inquiries being received from fleet operators regarding equipment adaptable to their business.

This is a reasonable expectation, but exactly when the fruit will be ready for plucking is another matter. The testimony of economists is a bit confusing when the future prospects of American business are under observation. Some economists see the bottom of the down-swing reached, and take

this for an encouraging sign. Doubtless, on the premise that a pendulum can go only so far on the downward swing and thereafter must go up. Which is similar to the reasoning that a dog can run into the woods only half way; thereafter he is running out. This logic meets with some embarrassment when one counters that a pendulum may rest a long time at the bottom of its swing if the clock runs down, and a dog may lose his way in the forest and be a long time finding his way out. But business has not completely run down, nor has it gone wholly to the dogs, so the logic may be considered in good standing. Still other economists perceive a tendency to even lower commodity prices. But no matter where the economists place the pendulum of business they all seem to be agreed that the dog will be in the woods all summer and won't be on his way out until fall.

Summer dullness, of course, is nothing new to the truck industry, so that it will be well content if the remainder of the economists' prediction comes true. "Out of the trenches by fall" appears to be a pretty general expectation, and if it is realized it will be a significant indication that business has cast off the doldrums in preparation for a march over the top.

Factory executives also seem to be of the opinion that autumn will not only bring a fall of leaves but also a fall of orders into dealers' laps, not, however, without the exertion of some effort on the part of the dealers. The following are some of their comments:

**H. C. Keenan, vice-president,
Sterling Motor Truck Co.**

"Anticipate steady truck sales during last half on par or better than first half. Believe bottom of buying slump has been reached and demand will reach normal trend by fall."

**L. A. Miller, president,
Willys-Overland, Inc.**

"Registration Willys-Overland commercial vehicles 39 per cent ahead of last year. We feel opportunities for truck business splendid in last half 1930 and feel confident truck sales will at least equal and probably exceed first half of 1930."

**Albert Staab, sales manager,
LeBlond-Schacht Truck Co.**

"From every indication we believe the last half of 1930 will compare very favorably with the first half in sales volume. We have recently made a survey among our branches and dealers and they all report the outlook for future business encouraging."

**M. L. Pulcher, president,
Federal Motor Truck Co.**

"Our business for the first six months was fairly good. We have no complaint whatsoever to offer and we are looking forward to a better six months. We believe as the year progresses that business will continually move toward the better, and we believe that by the end of this year and the beginning of 1931 we will be somewhere back near a normal basis."

**W. D. Graves, truck sales manager,
Dodge Brothers Corp.**

In addition to the observation quoted above, Mr. Graves wired the following: "I feel safe saying that volume truck business for balance of this year will retain at least as favorable ratio toward business for same period of a year ago as it has during first six months. There is marked improvement in interest being shown by large oil companies. Food products fleet owners and those lines of business supplying necessities of life have continued and doubtless will continue their purchases of trucks to adequately maintain their equipment at standards to which they are accustomed. There should be a marked increase for large trucks for remainder of year."

**Martin A. O'Mara, president,
Brockway-Indiana**

"Brockway-Indiana sales and deliveries for the first half of 1930 will be about 10 per cent under 1929 in number of units. This, despite the fact that we have a drop of approximately 51 per cent in our export sales in countries throughout the world, which represented a very substantial part of our business prior to this time. This new business has come through an entirely new clientele, because of the introduction of the new models and a very aggressive sales campaign throughout the Brockway-Indiana organization. Our volume could have been considerably increased during the first six months of this year had we been satisfied to force a larger volume of business from our export distributors, but this is against our policy.

"It is our opinion that the months of July and August will not be very promising, but we believe that starting along in September we should be-

gin to receive an increase in business which will continue until the end of the year, and we hope to be able to finish 1930 with a volume closely approximating 1929."

**Carl Parker, ass't sales manager,
Reo Motor Car Co.**

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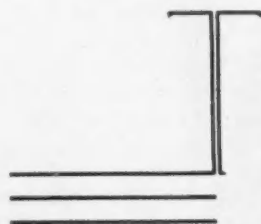
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INDUSTRY AIMS AT FALL TRADE SPURT

A PIONEER LOOKS

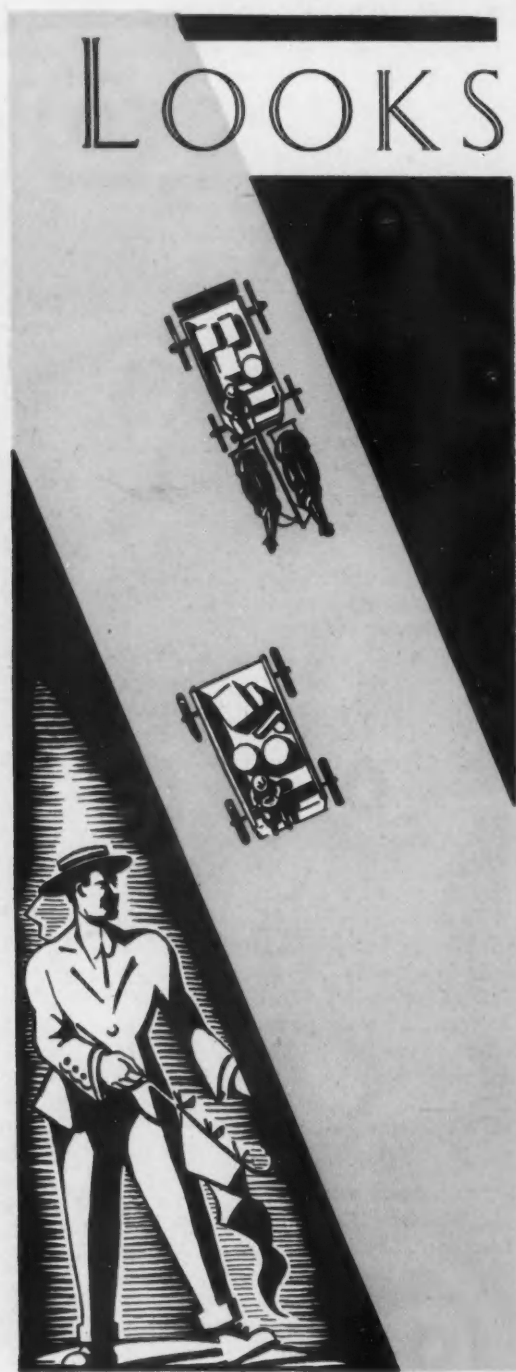
Closer Contact of Trade With Banking Interests Advocated by B. A. Gramm, Celebrating 30th Anniversary. Says Bankers of the Country See 15 Bright Years Ahead for Motor Truck Business



HEY, whose destiny it has been to successfully steer the commercial vehicle down the highway of Time, have had no picnic. Detours, obstructions and mire in the form of design defects, public diffidence, clashes between passenger car and truck interests, general lack of cooperation, exaggerated and careless selling and instability in financing methods have made the going rough. But great progress has been made; many of these obstacles have been permanently removed, and others are in the process of being remedied. The highway into the Future appears much brighter.

Believing that the historic observations and opinions concerning the present by one who is a pioneer in the industry and who has contributed not a little to the success of the truck as we know it today would be of great interest, COMMERCIAL CAR JOURNAL interviewed B. A. Gramm, president of Gramm Motors, Inc., who is celebrating his thirtieth anniversary in the truck industry. Mr. Gramm has built up an enviable record during these years, contributing as many as nine basic patents employed in present-day chassis design and engaging in many activities intended to improve general business, selling and financing conditions.

When asked to delve into the musty past and bring to light incidents of the period marking the truck's arduous beginning as well as later years of its development, Mr. Gramm gradually unraveled an experience of achievements which is nothing short of an inspiring tale of industrial romance. While engaged in the banking business back in the 90's, where he acquired 17 years of valuable financing ex-



perience, Mr. Gramm, having a penchant for mechanical things, became interested in early efforts to perfect motor-driven vehicles. Visualizing a wonderful future he decided to do some experimenting and soon found himself deeply enmeshed. Finally, in 1900 after several years of concentrated experimentation he completed designs for a six-passenger carry-all, which he constructed the following year. This vehicle, lever steer and developing 7 hp., was a success, but was destroyed in a railroad wreck. After this unfortunate mishap, Mr. Gramm projected his experiments into the fields of steam and electricity as well as gasoline to determine which of the three types of motive power was most feasible. Having decided on gasoline, six cars were built and exhibited at Madison Square Garden, New York, in

BACK AND AROUND



1903. These cars incorporated double opposed motors, band clutches and shift gear transmissions. In the fall of that same year Mr. Gramm developed a power take-off, which he demonstrated at a County Fair held at Chillicothe, Ohio, by operating a clover huller. A patent was applied for and granted in 1905, but, he explained, this was later dropped and given to the industry for the common good. During the succeeding five years Mr. Gramm added he obtained patents on an all-steel disk oil clutch, an H-type quadrant and a selective type transmission for chain-drive trucks. He declared that in 1906 one of the first models of four-cylinder trucks was brought out and sold by his company.

In the early years of the truck industry parts manufacturers were unknown and the chassis manu-

facturer had perforce to design and make practically all the units entering into the construction. In fact, Mr. Gramm points with pride to several of our present-day parts manufacturers who owe their success to his early struggles and encouragement in this department of the industry. Considerable credit is also due Mr. Gramm for the great progress made in interchangeability.

"As early as 1912 I fought for standardization of parts as a means of reducing the cost of construction and the cost of replacement parts to the user and in this connection I served four years as president of a national association dedicated to the principles of stand-

TURN TO PAGE 74, PLEASE



\$250,000

"I'm going to save \$250,000 this year on our truck operations."

That, dear reader, is not the beginning of a bedtime story although admittedly it smacks of fiction when associated with this year of disgrace, 1930. It is an actual declaration which the superintendent of a large fleet in New York City made to his superiors at the beginning of this year.

Naturally his superiors were skeptical. They probably even suspected that stock market operations had unbalanced both his bank account and his mind. But he assured them that he was serious and that his plans for saving a quarter of a million dollars in an unhealthy business year were all mapped out.

Well, gentle skeptics, this man went right ahead with his plans, and in the first five months of this year (that was when we last conversed with him) his savings amounted to \$110,000.

"Certainly I'm going to save the \$250,000 this year," he declared with vehemence when we asked him if he would save the

AFTER HOURS

balance of his promised amount during the remaining months of the year. "I have the entire thing figured out right here," and he opened a desk drawer and pulled out a sheet of type-covered paper.

"But \$250,000," we can hear incredulous readers protesting, "that's a lot of money. How can he save that much in one year?"

Frankly, we don't know all the details. But we do know that replacement of chassis and body equipment, rerouting and changes in delivery methods are the main factors in the fabulous economy. This may lead to suspicions that the fleet operation must have been sloppily organized and handled in order to make a saving of \$250,000 possible. It happens, however, that for quite a number of years this has been one of the most scientifically operated fleets in the country.

The idea here that we'd like to get across to other fleet operators is that not only is there need for scientific operation, but recognition of the fact that scientific operation can be improved by taking advantage of the latest developments of a progressive industry. A fleet that was scientifically operated five years ago can make no claim to such excellence today if it has not kept abreast of improvements in design and in operating methods. The tractors, trailers, high-speed engines, six-wheelers, special bodies, lighter bodies, balloon tires, door-to-door delivery vehicles and such like that have been developed in recent years, and the many things that are certain to be the products of future progress in the truck industry, must enter into the calculations of every fleet operator.

Don't get the idea that we mean the fleet man should add new equipment the moment it

comes on the market. If he is operating scientifically he will determine on the basis of cold facts whether over a period of time it would save him money or cost him more money to put in the new equipment. If a saving is indicated, scientific operation demands that the equipment change be made.

But in order to make an accurate appraisal of new equipment, it is essential that the fleet operator find out the facts. For that reason he owes it to himself and his firm not only to keep posted on new developments by reading but also to welcome truck and truck equipment salesmen and draw out of them every bit of information that he desires. And he'll never know whether a salesman has information of value to him unless he hears his story and then questions him.

Acquisition of knowledge and application of that knowledge are two requisites in an efficient fleet superintendent. He must keep abreast of all developments by acquiring full knowledge of them, and keep his fleet operation scientifically up-to-date by applying that knowledge.

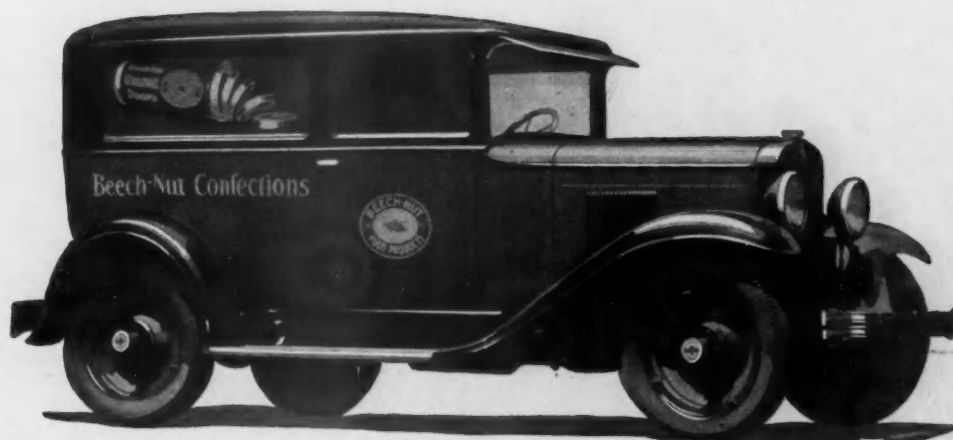
TID-BITS

IT looks now as if Congress will not pass a bus bill until the winter session. That's a break for the interests sponsoring this legislation because the bill as it now stands amended is far from what the interests want. . . . An analysis just completed by the National Safety Council saddles the blame on the private passenger car for the increase in motor vehicle deaths in the two-year period 1927-1929. In the period analyzed private cars involved in fatal accidents increased 23 per cent while commercial cars decreased nearly 5 per cent. Pass that cake around.—G.T.H.



IT'S WISE TO

CHOOSE A SIX



The Sedan Delivery

A wise choice on the basis of economy alone

One after another—leading business organizations everywhere are standardizing on the Chevrolet Six. For, entirely apart from its Fisher body style . . . its travel-ease and comfort . . . its modern six-cylinder performance . . . Chevrolet has proved itself a wise choice for the fleet operator *on the sole basis of economy.*

To begin with, the first cost of the Chevrolet Six is comparable with the lowest in today's motor car market. But more impressive still is Chevrolet's unsurpassed economy of operation and upkeep.

No other car on the road today gives any better gasoline and oil

mileage. For the Chevrolet engine is a modern, *efficient* engine. It has overhead valves, crankcase ventilation, a hot-spot manifold, the latest type carburetion and many other advanced features that reduce fuel and oil consumption.

From the standpoint of upkeep, Chevrolet also saves the owner money. Its six-cylinder smoothness protects the entire car from destructive vibration, and prolongs its life. Many factors of dependability—including a large rugged rear axle, a heavy full-length channel steel frame, and hardwood-and-steel Fisher body construction—hold

maintenance cost to a minimum. Tire expense is negligible, due to Chevrolet's big, durable, full-balloon equipment. And Chevrolet flat-rate service charges on many operations are the lowest in the industry.

If you are interested in cutting costs—see your nearest Chevrolet dealer and investigate the Chevrolet Six. Consider the advertising and prestige-building value of its smart appearance. Consider also the pride your men would take in driving it. Check over its many factors of economy, comfort, performance. Then you'll agree, *It's wise to choose a Six!*

CHEVROLET MOTOR CO., DETROIT, MICH., Division of General Motors Corporation

CHEVROLET SIX

Sport Roadster . . . \$555	Club Sedan . . . \$665	ROADSTER or PHAETON	Sedan Delivery . . . \$595	1½ Ton Chassis \$520
Coach \$565	Sedan \$675		Light Delivery	With Cab \$625
Coupe \$565	Special Sedan . . \$725		Chassis \$365	Prices f. o. b. factory
Sport Coupe . . . \$655	(6 wire wheels standard on Special Sedan)	\$495	Roadster Deliv'y \$440	Flint, Mich. Special equipment extra.
			(Pick-up box extra)	



By G. LLOYD WILSON

PROFESSOR OF COMMERCE AND TRANSPORTATION,
UNIVERSITY OF PENNSYLVANIA

July, 1930

The Commercial Car Journal
and Operation & Maintenance

THE RAILROADS GO STORE-DOOR DELIVERY

Established and Reputable
Trucking Concerns Will
Continue to Participate in
the Large and Profitable
Terminal Hauling Field

RIVERS of printers' ink and mountains of type have been expended in the past 10 years in cussing and discussing "store-door delivery," or "store-door freight service," as it is more correctly designated. Despite—or perhaps because of—this expenditure of ink and type there are still many questions relating to this plan of transporting freight traffic which are not fully appreciated or understood by many, including the operators of motor freight services, who, beyond the shadow of doubt, are affected by the progress and plans toward the improvement of handling freight shipments by means of store-door service.

Perhaps at the very outset of this article, in which an attempt will be made to view the brightest of the high lights in this field, it is well that the meaning of store-door freight service be clearly understood so that we may all be talking about the same thing.

Store-door freight service is the type of freight service which includes not only the station-to-station service provided by the railroads, or the dock-to-dock service offered by steamship lines, but a complete service which carries the freight from the shipping platform of the seller to the receiving platform of the buyer of the goods. It includes not only station-to-station service or dock-to-dock service, but terminal trucking or cartage services at either end of these line-haul services. It is a complete freight-transportation service, just as the United States Post Office service carries the mail matter from the mail chute at the office door or mail box at the factory of the sender to the desk of the addressee. It is a coordinated service involving the use of railroad freight trains, express trains, steamships, canal barges and motor trucks, and requiring the brains and brawn of employees of railroad, express, steam-

ship and motor truck organizations. It is a service rendered at through point rates, rather than at rates made by combining line-haul and trucking rates, as must be done under present arrangements. It is a service rendered under the continuous liability of the carriers, rather than under the present arrangement of the individual liability of each type of carrier handling the freight.

• The Lesson of Experience •

Many years ago, when railroads were newer than they are today, and when the Civil War was an event as fresh in the public mind as the World War is now, several railroads adopted a scheme of "store-door delivery" in order to equalize a bitterly competitive position in Baltimore and Washington. This service was not a complete store-door freight service. No arrangements were made for trucking freight from the shippers' places of business to the railroad freight stations—the service was rendered in one direction only—from the railroad freight stations to the stores or warehouses of the consignees. The service was rendered only in connection with traffic in less than carload lots and only such less than carload traf-

fic as came to the competing railroads from New York and Philadelphia and from points in New England. The service was given without extra charge and restricted to certain free-delivery zones in the two cities. Started first in 1867 in Baltimore and extended to Washington in 1883, the service was continued until Sept. 1, 1913, when it was withdrawn simultaneously in both cities as a result of a series of complaints before the Interstate Commerce Commission which involved charges of unjust and unreasonable discrimination as a result of certain consignees or sections of the cities receiving free store-door service while other consignees or sections were denied the service or that certain traffic received free store-door delivery while other similar traffic did not. The commission permitted the carriers to withdraw the services, and in commenting upon the situation remarked in one of its decisions:

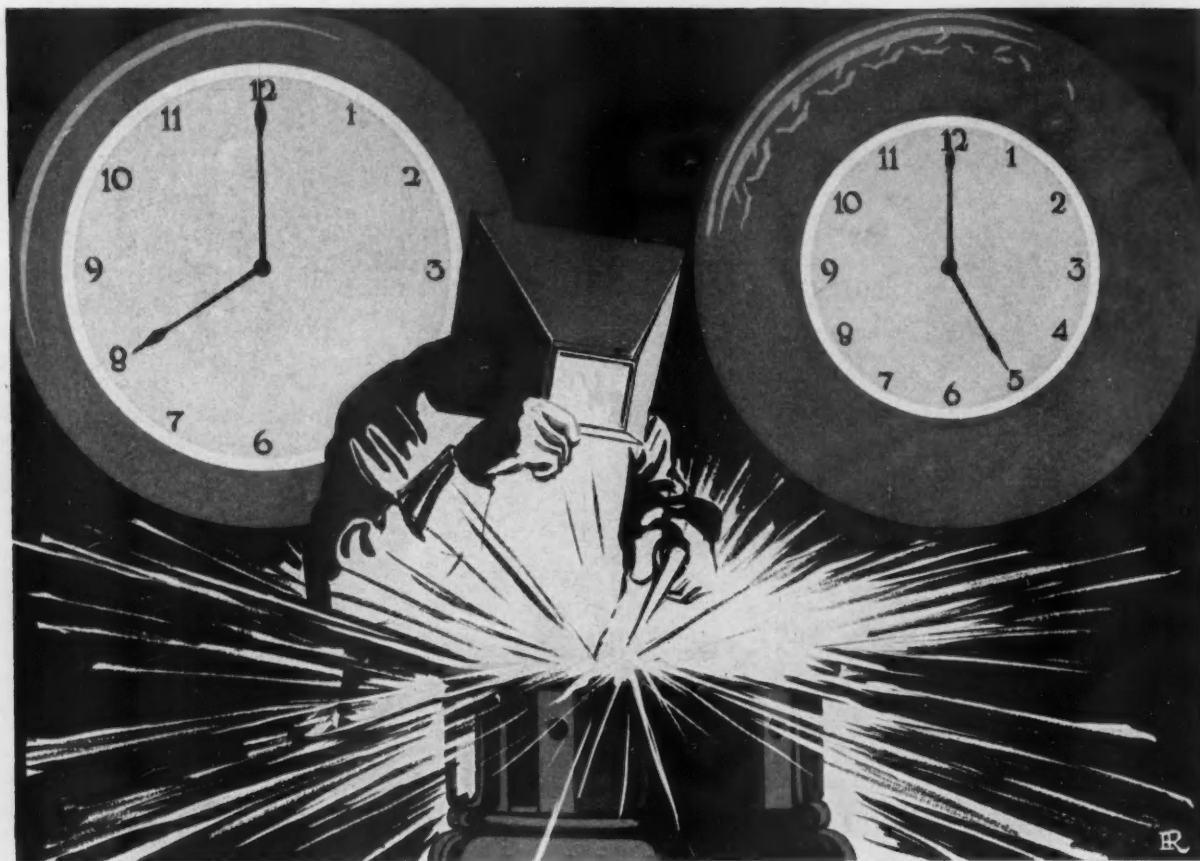
"... the service as now rendered, at both Washington and Baltimore, presents features which, in the absence of further explanation, appear to be grossly discriminatory. For instance, the merchants of New York City or of Philadelphia may now ship certain property to Baltimore or to Washington and receive store-door delivery without extra expense. The merchants of Pittsburgh, Pa.; Cleveland, Ohio; Buffalo, N. Y., or even Jersey City, N. J., or Wilmington, Del., however, when shipping like property to either Baltimore or Washington must pay rates which are substantially in line with those charges from New England, New York or Philadelphia, and must in addition pay or sell upon a basis that will enable their consignees to pay drayage charges at Baltimore or Washington."⁽¹⁾

Thus passed the first period of store-

TURN TO PAGE 65, PLEASE

(1) 27 I.C.C. 349.

SOLID TO PNEUMATIC



Metal Wheel Change-Over is Simplified by Gas and Arc Welding and Use of New Steel Felloes

A TINY jet of gas controlled with the accuracy of a lathe tool makes cuts so nearly perfect that machining of spokes of steel wheels is unnecessary, according to the experience of United Wheel & Rim Service Co., Philadelphia branch. Because of this saving of time and other economies brought about by use of special equipment this station regularly turns out wheel cut-down jobs in less than an eight-hour day.

An oxy-acetylene cutting torch is employed for cutting spokes. The wheel is mounted on a vertical spindle on two cones

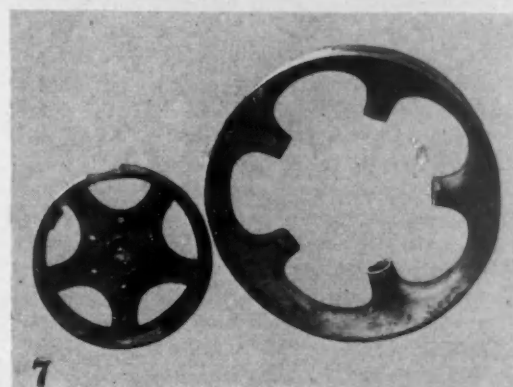
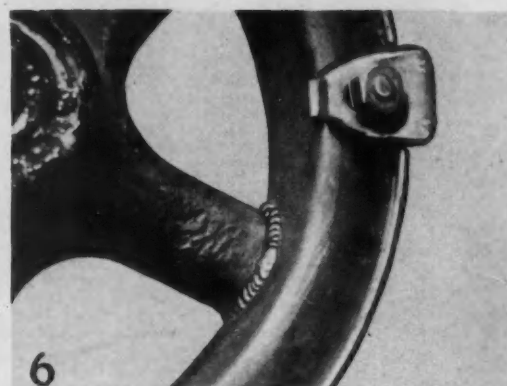
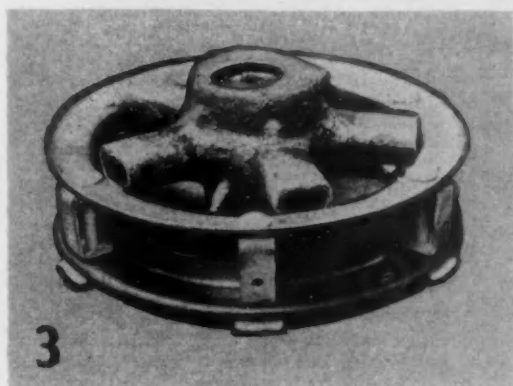
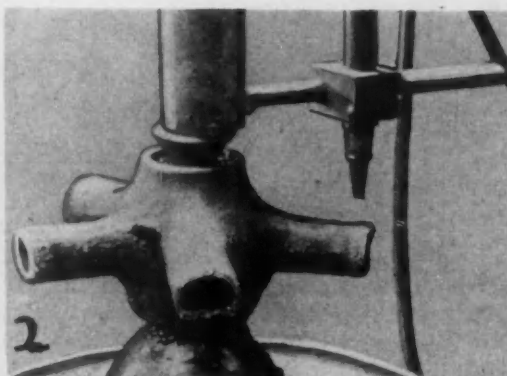
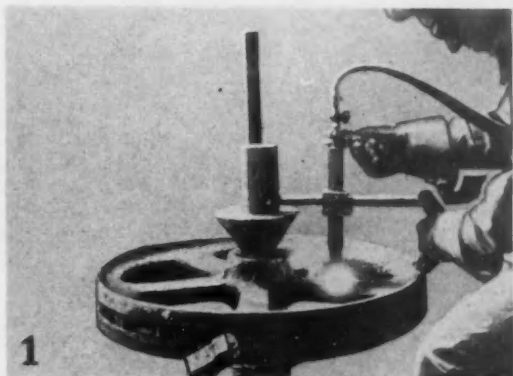
and the torch is supported on an adjustable arm attached to the spindle, as shown in Fig. 1. When all of the spokes have been cut the wheel drops off the hub and stub spokes, as in Fig. 2.

In the cutting operation the torch is placed over the middle of one spoke and the metal heated in a spot directly under it. When the spot shows that partial melting is taking place the extra oxygen jet is turned on and the cut is made to one side of the spoke, then to the other edge of the spoke. Slag frequently accumulates about the cut and this will not burn. Dirt, which causes slag deposits, may be dislodged by rapping on each spoke with a hammer before cutting.

Many shops cut the spokes off too long and machine them to size. No machining is done in this shop and new felloe bands are welded directly on the ends of the stub spokes. That the resulting weld is clean is shown by Fig. 6.

The second stage, and perhaps the most important, is inserting hub and spokes in the new steel felloe. Slight burrs on spoke ends remaining after cutting are peened off with a hammer and the hub is then placed in the

IN A WORKING DAY



felloe band (Fig. 3). The felloe band must be aligned accurately and this is done like a wheel truing test, as in Fig. 4, except that the vertical spindle is employed.

Arc welding is used to join stub spokes and felloe. This is a job which calls for skill as each spoke must be attached to the felloe, as though made in one piece. A minimum of metal is added at the joint (Fig. 5) and the completed job appears as in Fig. 6. Excessive heating of the felloe must be prevented to avoid warping. Comparison of size of a steel wheel for solid tires and the same wheel cut-down for pneumatics is given in Fig. 7.

Photographs shown of a wheel cut-down job were taken by courtesy of J. Kenyon, service manager, United Wheel & Rim Service, Inc., Philadelphia. Welding by Charles Yushinski.

BODIES AND CABS HOT

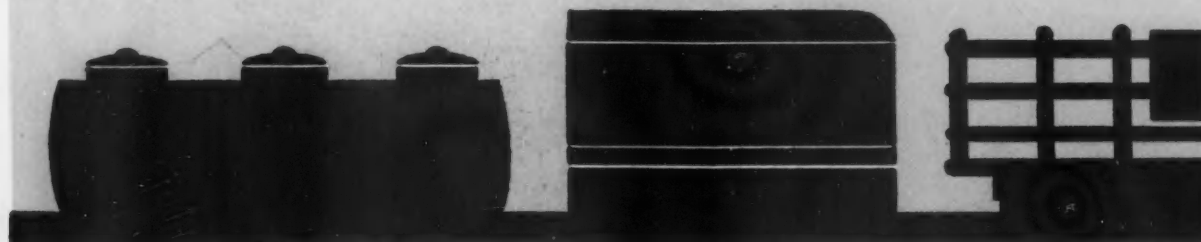


Fig. 1—Aluminum Tank

An all-aluminum truck tank and semi-trailer unit of 750-gal. capacity was recently placed in service in Cleveland by the National Refining Co. The aluminum tank is a Davisbilt Clipper, developed by the Davis Welding & Mfg. Co., Cincinnati, Ohio, and the semi-trailer is a product of the Freuhauf Trailer Co. The trailer is also made of aluminum, except for springs, spring hangers, axle and brake drums. The upper fifth wheel, support wheels, castings and frame also are of aluminum. Saving in deadweight by aluminum unit over a similar steel unit is 1875 lb. The tank is built almost exclusively of aluminum, the metal being used in the bulkhead, wrapper sheets, castings, finish bands, bolsters, bucket box, can racks and other sheet metal panels and in piping and fittings except the valves. Construction throughout follows standardized Davisbilt practice with the exception that butt welds are used in place of lap welds, which are not recommended as practical for aluminum. The bulkheads are convex flanged, of generous radius and heads are butt welded to the wrapper sheets. The only major place in which aluminum is not used is in the running board, the bucket box and barrel rack floors.

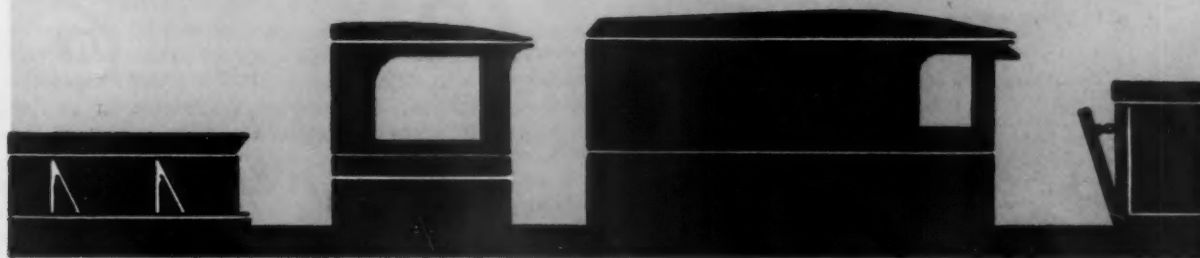


Fig. 2—Stake Body

Davistake platform and stake-type bodies are furnished by the Davis Welding & Mfg. Co., Cincinnati, Ohio, in 15 sizes for any make of truck, ranging from 1 to 7½ tons in capacity. Platforms of these bodies are framed in 4 x 4 x ¼ in. angle iron, having mitered and welded corners. The vertical edge of this angle frame provides protection against side-swipe and the horizontal edge protects the outer edges of the floor. This angle iron also provides a support for stake pockets, which are steel castings electrically welded to insides of both legs. The platform is supported on composite steel channel and oak bolsters, consisting of oak filler blocks carried in channel irons. Outboard ends of bolsters are designed to provide proper wheel clearance for the overhanging platform. Bolsters are attached to longitudinal oak sills by adjustable bolster clips. The floor consists of white oak boards which extend under horizontal edges of frame angle iron on all



OFF PRODUCTION LINE



sides. The boards are 2 in. thick and are protected by 2 x 1/4 in. iron strips bolted in place. The floor is bolted to iron plates provided on the upper faces of the bolsters.

Fig. 3—Aluminum Tank

Standard Steel Works, North Kansas City, Mo., is making aluminum tanks which range from a small 400-gal. tank for Fords, Chevrolets and other light trucks up to large semi-trailer and trailer units capable of carrying 4000 gal. per unit. In addition to its regular line, this company produces tanks to individual specifications in any combination of compartments and for any make of truck. Features of standard construction are tri-point suspension and shock-absorbing saddle straps. The company points out that aluminum cuts the deadweight of construction about 50 per cent over steel, which means an increase in payload of from 20 to 40 per cent. The illustration shows truck and trailer tank equipment made by the Standard Co. for the Three-D Products, Inc., Fort Worth, Tex.



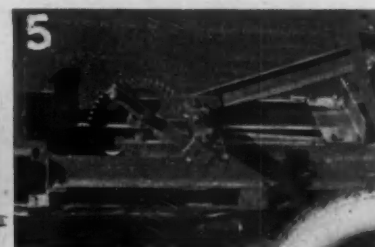
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Fig. 4—Frameless Tank Trailer

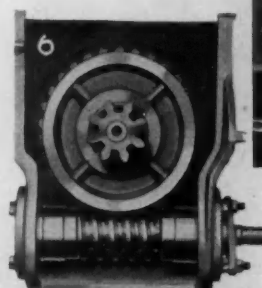
The Columbian Steel Tank Co., Kansas City, Mo., experimenting with aluminum, has begun fabrication of aluminum semi-trailer truck tanks of the frameless type as employed in its present semi-trailer steel truck tanks. The frameless aluminum tanks will weigh one-third less than tanks mounted on drop-frame trailers. To produce a tank able to act as its own draft member, the Columbian semi-trailer has interior shear and splash plates welded into a single unit with integrally welded pipe line.

Figs. 5, 6 and 7—Rotary Dump Bodies

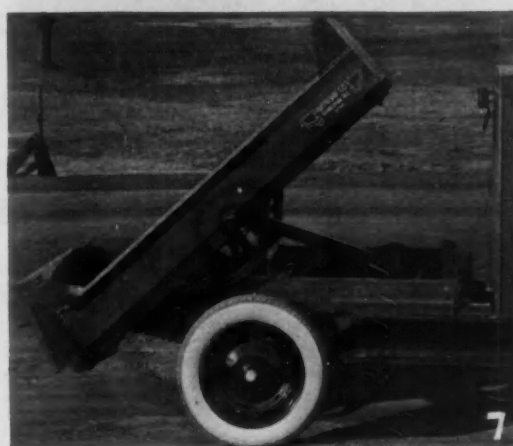
Two new low-price, rotating-hoist dump bodies, one operated by power (Fig. 7), and the other by hand (Fig. 5), are offered by the Anthony Co., Inc. A feature of the power-driven hoist is a large one-piece malleable gearcase which carries a double-reduction unit composed of a worm, a worm wheel and a spur pinion (Fig. 6). The spur pinion, which projects beyond the case, is in mesh with a large spur gear, to which in turn is attached one end of a push rod. The other end of the push rod is



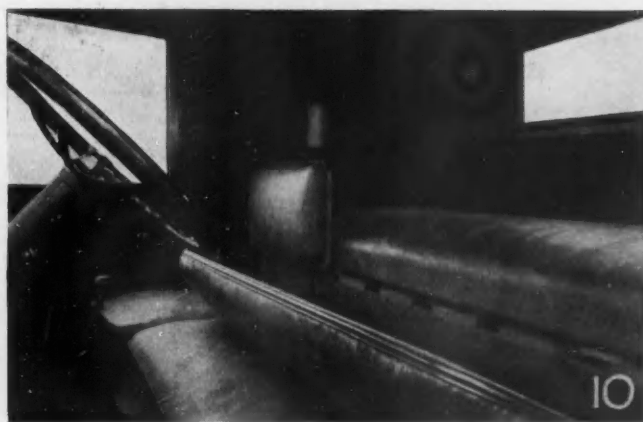
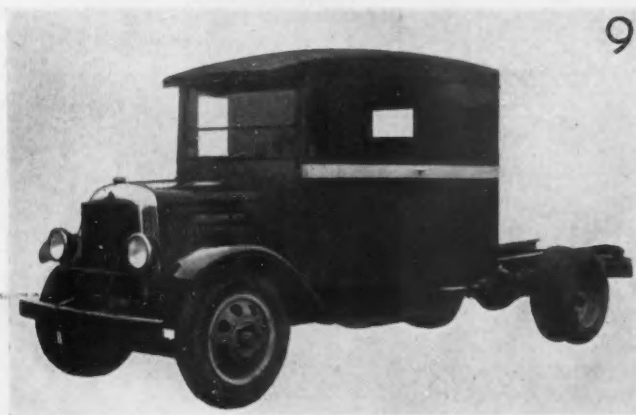
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BODIES AND CABS HOT OFF PRODUCTION LINE

attached to the body understructure. One-half revolution of the spur gear raises the body to its full dumping angle, the body riding to its elevated position upon two rocking arms. Automatic front body latches secure the body to the subframe when in riding position. As the body starts to rise, these latches automatically release. Another feature of the Anthony hoist is an automatic throw-out assembly. When the body reaches its full dumping position, this unit automatically disengages the power takeoff. Three-point suspension is carried out, both in the tipping and riding position of the body. In the riding position, the body rests on two rockers and a front rest.

The Anthony rotating hand-hoist body is similar in construction to the power job except that it is manually operated. It requires only $4\frac{1}{2}$ turns of the crank to raise the body. A general-purpose dump body having removable sides is furnished for use in connection with either type hoist or the Anthony plain rocker gravity job.

Fig. 8—Coupe Cab

Five models of coupe-type cabs specially designed for every model White chassis are the latest additions to the line of Highland Body Mfg. Co., Cincinnati, Ohio. All outside surfaces of these cabs are of 18-gage steel. Rear corners are well rounded. The rear curves easily into the roof, which slopes slightly toward the cadet-type front equipped with sun visor. The windshield, which comprises a heavy metal frame with plate glass set in rubber, is operated by segments that lock it tightly when closed. Inside panels of door and back are of three-ply wood stained to match trim, which is brown Spanish artificial leather. Lazy-backs are equipped with coil springs, as are the seat cushions, which are deep and built in pairs. Doors are of passenger car design with continuous steel hinge and truck cab lock having remote control. Windows are mounted in felt channels and are operated by high-speed window lifts. Mounted at three points, the rear corners of the cab do not come in contact with the frame.

Figs. 9 and 10—Sleeping Cab

A sleeping cab which provides quarters for one or two persons has been designed by the Weatherproof Body Corp., Corunna, Mich., for long-distance motor hauling service. Made of wood and sheathed in 20-gage steel, this cab has a seating capacity of three and sleeping capacity for one or two. The sleeping berth, which is located behind the lazy-back, is 80 in. long and 20 in. wide and is fitted with a spring cushion raised at one end to serve as a pillow. If two bunks are desired, the second is located above the first. Under the lower berth is a compartment 20 x 30 in. running the full length of the cab for storing bedding, tools, etc. Lazy-backs and seats are cushioned with Fobafimi pads and upholstered in artificial leather. The steel frame windshield is of two-piece, full-ventilating type, and a 10 x 21 in. plate glass window sliding in felt channels is provided in the rear. Side windows or solid steel panels are supplied at both ends of the bunk. Doors are held in place with a continuous hinge and are equipped with heavy-duty spring door catches.

Fig. 11—Coal Heaver

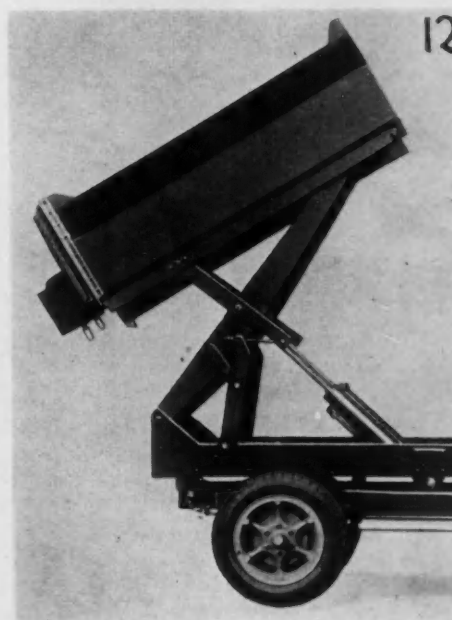
A side-dumping elevating body designated as the "Coal Heaver" is a recent addition to the body line of the Hughes-Keenan Co., Mansfield, Ohio. This new job, which dumps on the right side, has two compartments, each of 40 cu. ft. capacity, making it possible to deliver two one-ton orders of different kinds of coal. The dividing partition between the compartments is removable and lifts out vertically. Plates are welded in each compartment to throw coal into chute openings. Extension straight sides for 4000 lb. of coke are available if desired. A mechanical power hoist raises the body vertically $33\frac{1}{2}$ in., although it can be stopped at any point during elevation. Tilting is accomplished by hand to any desired angle. A special support is provided to release strain on truck springs when unloading. This support when not used may be folded up alongside the body. Sides, which open either from top or bottom, have gates 17 in. wide and 10 in. high and are provided with 5-in. spouts. To simplify basket unloading, an adjustable shelf, shoulder high, is provided to support baskets while being filled. This shelf folds under the side of the body when not in use.



Fig. 12—High-Lift Hoist

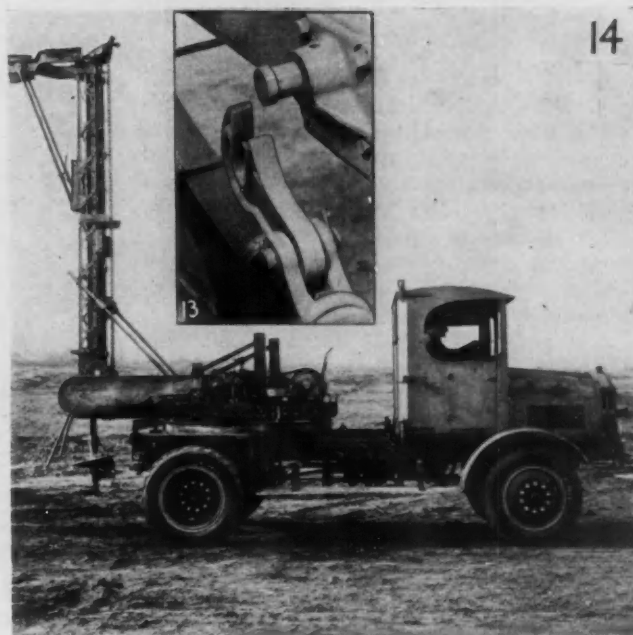
Two hydraulic-cylinder units brace and operate the steel subframe lifting mechanism of the new Model A-P high-lift hoist recently added to the line of the Wood Hydraulic Hoist & Body Co. This unit is designed for truck chassis of 1 to 2-ton capacity.

An equalizing valve keeps oil pressure uniform in both cylinders. Various dumping positions are provided as the hoist begins to rise, starting first as a straight end dump with a dumping angle of 30 deg., then continuing upward at the same dumping angle until fully elevated. Total elevation obtained is 4 ft. A 75 cu. ft. body made of 10-gage sheet steel is furnished with the unit. It is equipped with a door and bagging chute with deflector in tailgate and a telescopic three-section chute.



Figs. 13 and 14—Line Construction

The Four Wheel Drive Auto Co. is offering a 2-ton job designated FWD Model BTL6, especially designed for line construction service. Built into this unit are a power takeoff unit for operating an air compressor, single and double drum winches and an earth-boring machine. A safety lock is provided on the transmission so that power takeoff cannot be operated while the truck is moving. This is accomplished by interlocking shifting and power takeoff levers so that the power takeoff can be thrown in only when the shift lever is in neutral and vice versa. Locks on the rear axle differential and central differential are available for use under poor traction conditions. To provide a rigid bed, which is essential when the boring machine is in operation, an automatic spring lock is located on the side of the truck supporting the earth-boring machine (Fig. 13). The lock itself is a lever, the fulcrum of which is seated in the spring bed. The other end, which is formed like a jaw, snaps into a stud shaft carried in a bracket bolted to the frame. This lever is released by a hand pull rod when strain is relaxed.



OVERHEAD 6's DRIVE

Specifications of New White Models

Model	63	64
Capacity	2½ tons	3 tons
Engine, model	3A	1AB
size	6-4 x 5¼	6-4½ x 5¼
Transmission, model	4B	7B
speeds and mounting	4-unit	4-unit
Brakes, service	4-wheel hydraulic	2-wheel air
hand	driveshaft	driveshaft
Rear axle, model	10C	2C
type	full-floating	full-floating
drive	bevel	double-reduction
ratio	6.33 to 1	7.16 to 1
Detailed specifications will be found in table starting on page 65.		

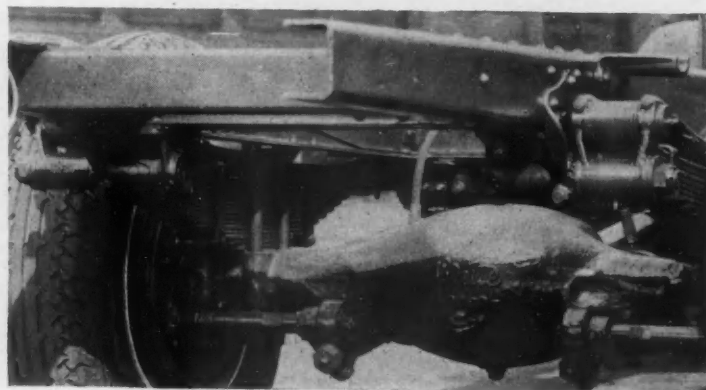
Belt line, ample cowl and long hood give White's new 2½-ton Model 63 the appearance of length. A cowl ventilator and horizontal louvers in the running board uprights add to the smartness

Two-Spark Ignition is Provided in Engines of Model 63, a Medium Duty Unit, and Model 64, a Fast Heavy Duty Truck



TWO spark-ignition, downdraft inlet manifolds with heated risers, aluminum alloy double invar strut pistons and salt-cooled exhaust valves characterize six-cylinder engines incorporated in White's two new models. These two new additions, designated as Models 63 and 64, are rated at 2½ and 3 tons and are available in three and five wheelbase sizes respectively.

The powerplant of Model 63 comprises a 4 by 5¼ in. engine displacing 396 cu. in., a single-plate wet clutch and a four-speed transmission with a first speed ratio of 6½ to 1. Final drive is through a single-reduction, full-floating axle with provision for various high-pressure and balloon tires. A range of five ratios is available. Service brakes are of the four-wheel, internal hydraulic type, cam-operated by external cylinders and power-amplified by a vacuum booster. Air brakes are interchangeable at extra cost with air

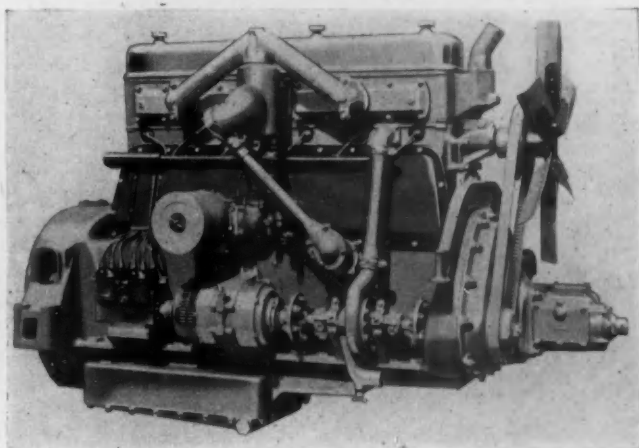


A double-reduction White type rear is used in the Model 64, the new 3-ton White. An interesting feature is the rear-end shackling of the springs. The lower shackle bolt is carried through the supporting bracket to a distance equal to that on the spring side. Spring U-bolts are extended through bosses in axle housing

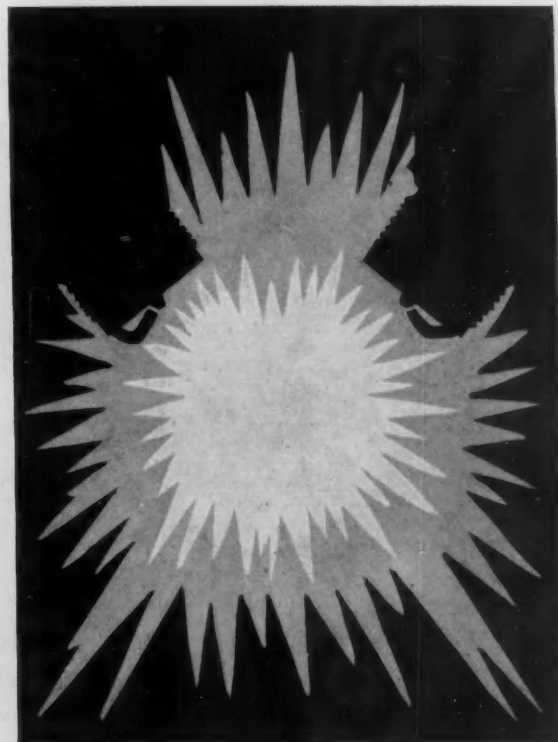
2 NEW WHITE MODELS



Above: Gasoline tanks are three-point cradle-mounted on the outside of the right rail. Right: Model 63 has a bevel rear and four-wheel brakes with external hydraulic cylinders at end brake cross-shaft levers



Unit-mounted engine used in Model 64 possesses many features. The carbureting system includes a hot-spotted vertical riser, downdraft intake manifold, air cleaner and a camshaft-driven centrifugal governor. Water pump connects above the inspection plate, and compressor is mounted at the front end

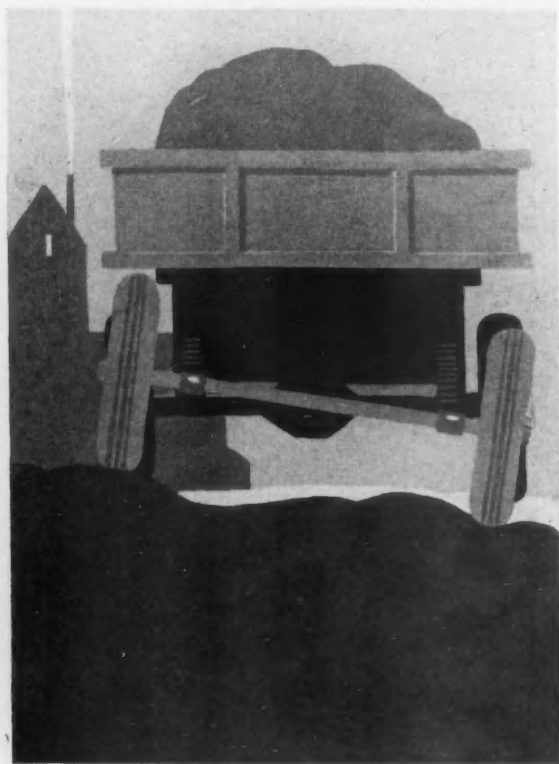


compressor driven off the crankshaft at the front end of the engine. The hand brake, mounted on the propeller shaft, of new design, consists of a double drum carrying two expanding shoes.

Engine of Model 64 is also unit-mounted. It has a 4 $\frac{3}{8}$ -in. bore, 5 $\frac{3}{4}$ -in. stroke, displaces 519 cu. in. and develops 100 hp. A two-plate dry clutch and a four-speed transmission providing the same ratio as its companion model, 6 $\frac{1}{2}$ to 1, completes the powerplant. A White dual-reduction, full-floating axle is used on the rear. While 36 by 8 in. dual tires are furnished as standard equipped, various sizes can be fitted. Service brakes are of the internal two-wheel type, operated by air, although four-wheel air brakes are available at extra cost. The hand brake is similar to the type employed in the lighter model. An auxiliary transmission is available on this model at additional cost. It provides a reduction of 1.47 to 1 and various takeoff openings.

Following features apply to both models: Pressed-steel frames, cast aluminum radiator shells and detachable cellular cores, three-point cradle mounting of gasoline tanks on right side of chassis and cam-and-lever steering gears.

MARTIN-PARRY HAS \$135 6-WHEEL UNIT FOR FORDS

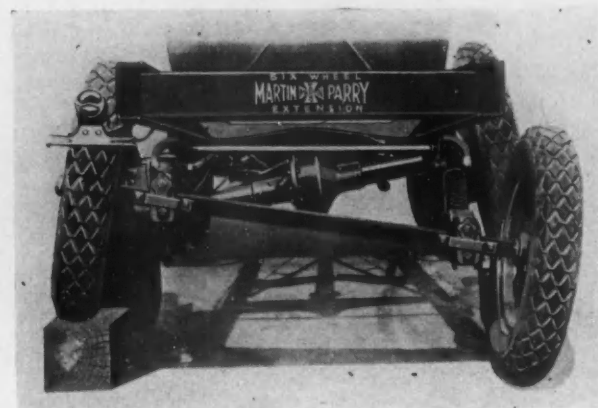
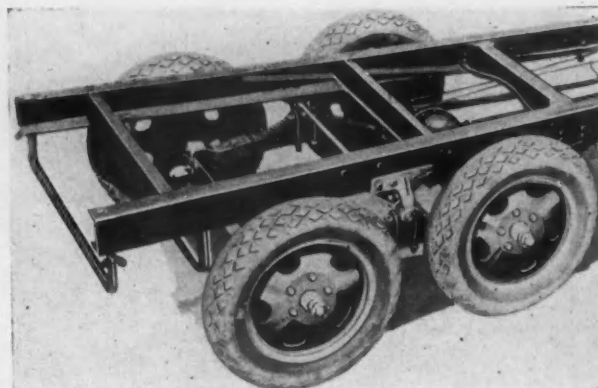


Unveiled at Ford Branches on 131 and 157-in. Wheelbase Units During National Truck Week Exhibits

LIMITED sidewise movement of the square extra axle in Martin-Parry's six-wheeler for 131 or 157-in. wheelbase Model AA Ford trucks enables the extra wheels to track the driving wheels and permits trucks with attachments to turn as sharply as standard trucks. Another feature of the unit is that it is shipped knocked down including extension frame and assembled directly on the Ford truck frame. This construction makes possible an installation charge of only \$10 and low freight rate; for example, less than \$4 to Philadelphia.

Ford rear springs are employed, front ends attached to the Ford axle by regular shackles, which, however, are underslung. Rear end of the spring is inserted in a fitting called a compensator shoe and is held in place by regular spring bolt. This shoe has a single roller, bearing on top of the dead axle, which provides for rocking of the axle and sidewise motion.

Single or dual tires, high-pressure or balloons, may be used on the unit, mounted on Ford demountable disk wheels. A spare tire carried is included in the unit. For very bad going a V-belt may be placed around space between double rear tires on drive and dead axles.



When assembling the unit, side rails of the extension frame are bolted in turn to Ford frame and then crossmembers and tie rod are bolted in place. Sidewise movement of dead axle is limited by straps bolted to it

FORD PUTS MORE SNAP IN TRUCK FRONT END

Lines Resemble Those of Passenger Cars; Radiator is Higher and Fenders Are Wider and Longer

FORD'S new Model AA trucks and Model A light delivery cars embody alterations in appearance. Changes in the trucks are principally in the front end, which has been completely redesigned, and in the cab. Lines of the front resemble closely those of the improved passenger cars introduced last December. The radiator is higher, fenders are wide and flowing and a black cowl strip adds distinction.

Cabs, open or inclosed, fit either of the Ford models. The inclosed cab, made of steel, is low in appearance yet provides ample head room. The roof is covered with double texture rubber top material. Cushions are trimmed in dark cobra grain artificial leather in plain panel style. Good visibility is afforded by design of the door, which permits use of a narrow pillar. The windshield, fitted with Triplex shatterproof glass, is in one piece and tilts forward to give ventilation across the front of the cab. The wiper is of the vacuum type. Other features of the cab are a metal dispatch box, rear view mirror, rear window and large tool compartment. The top of the open cab is of black rubber top material, easily removed. Side curtains are of black pyroxylin coated fabric with large window openings of heavy celluloid.

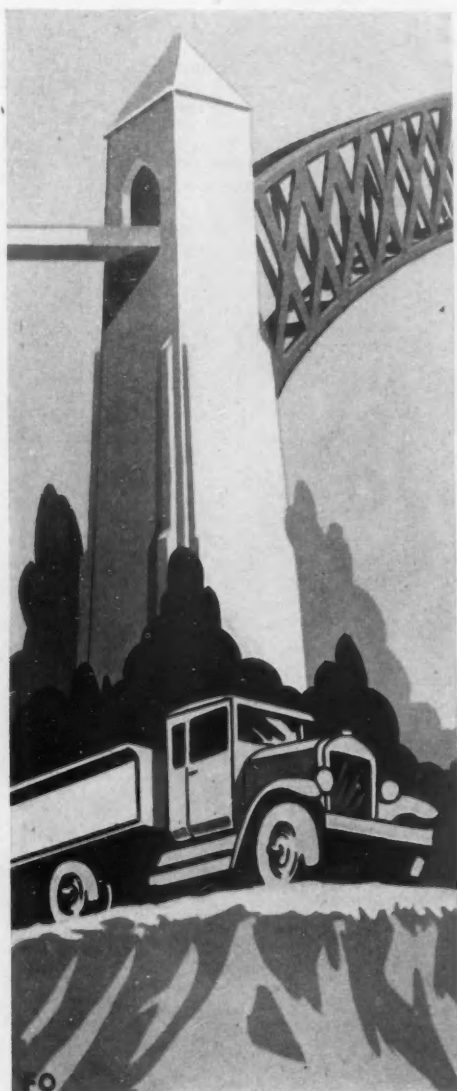
A platform body which can be equipped with stakes and a panel body have been added to the Ford body line for AA trucks. The platform body is 5 ft. 8 in. wide and 8 ft. 1½ in. long. The rack boards used to convert it into a stake body extend up 26 in. from the floor. Loading dimensions of the panel body are approximately 48 in. in width, 47 in. in height and 85 in. in length. The Model A line of new commercial cars also has been increased and now comprises a pick-up body, a de luxe delivery, a small panel car and a station wagon.

Ford's new 157-in. wheelbase model secured by lengthening the standard 131-in. wheelbase job 25 in., provides 120 25/32 in. from back of cab and 77 9/32 in. from back of cab to center line of the rear axle.

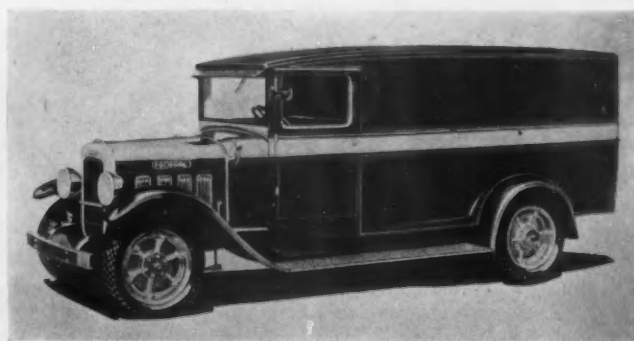


New AA Ford equipped with platform stake body, 68 in. wide and 97½ in. long

\$830 1 1/2-TONNER IS LOWEST IN FEDERAL HISTORY



Model D Has a 3 3/4 x 4 1/4-in. Four-cylinder Engine and Four-Wheel Hydraulic Brakes



A belt line around the panel body of Federal's new Model D blends with the hood lines

Specifications of 1 1/2-ton Federal

Model	D
Capacity	1-1 1/2
Engine, make	Continental
size	4-3 3/4 x 4 1/4
Transmission, make	Warner gear
speeds and mounting	4-unit
Rear axle, make	Clark
type	full-floating
drive	bevel
ratio	6 3/4 to 1
Brakes, service	4-wheel hydraulic
hand	external transmission

For more specification details, see table starting on page 65.

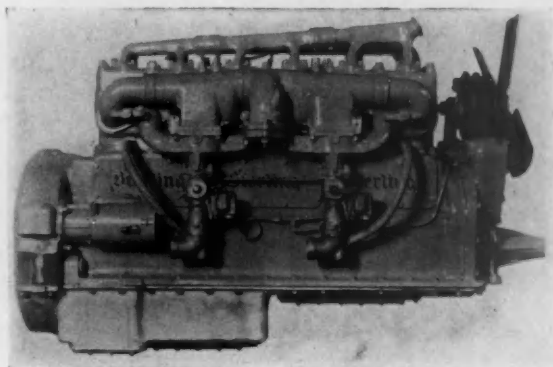
BESIDES establishing a new low in its latest \$830 offering, Federal has achieved attractive appearance. The new unit, designated as Model D, and rated at 1 to 1 1/2 tons capacity, is low-hung and incorporates several improvements in the front end which contribute considerably to smart looks. A definite touch of style is imparted by a high, chromium-plated radiator, large headlamps supported by a tie-rod connecting the two front fenders, a heavy channel-steel bumper supported by brackets built integral with the frame, a shapely cowl and stylish louvers.

Powered by a four-cylinder 3 3/4 x 4 1/2-in. engine developing 47 1/2 hp. at 2500 r.p.m., and equipped with four-speed transmission, bevel axle and Lockheed hydraulic brakes, Model D is available in two wheelbases, namely 131 and 151 in.

The engine, a Continental, is equipped with governor, Zenith carburetor, air cleaner, oil filter, gasoline strainer and mechanical fuel pump. A single dry-plate Borg & Beck clutch is mounted in unit with a Warner Gear four-speed transmission. Delco equipment is used for starting, lighting and ignition. Final drive is through a full-floating bevel-drive Clark axle with a standard ratio of 6 3/4 to 1 and an optional of 5 2/5 to 1. Lockheed four-wheel hydraulic brakes acting in 15 x 2-in. drums are standard. A contracting band mounted on the rear of transmission is employed for hand braking. The frame, 6 x 2 3/4 x 1/4 in. pressed steel, reinforced by five cross-members, is supported by semi-elliptic springs, 38 in. long in front and 50 in. rear. Tires are 6.00/20 balloons in front and 32 x 6 in. high pressure tires in the rear.

STERLING PETREL 6 IS LARGEST TRUCK ENGINE

Displaces 779.3 Cu. In. and Develops 185 Hp. at 2200 R. P. M.



Two carburetors with hot spots above supply fuel to the six cylinders of the Sterling Petrel. The aluminum crankcase extends below the crankshaft; bearings are interchangeable, and aluminum pistons are used for high speeds.

DESIGNED to give heavy pulling ability at low speeds, to provide rapid pick-up and maintain sustained high speed, the six-cylinder L-head Sterling Petrel, offered by the Sterling Engine Co., Buffalo, has power for almost any road condition. This engine, which is the largest in the truck field, has 5 1/4 in. bore, 6 in. stroke, 779.3 cu. in. displacement and develops 185 hp. at 2200 r.p.m.

Simplicity and interchangeability of similar parts are the keynotes of the design. Rigidity is secured by extending the aluminum crankcase from below the crankshaft to several inches above the lower end of the cylinders. Transverse vertical walls in crankcase support bearings for crankshaft, camshaft, pushrods and accessory drives. The 152-lb. counter-

Specifications of Sterling Petrel

Type	L-head
Size	6-5/4 x 6 in.
Displacement	779.3 cu. in.
Horsepower	185 @ 2200 r.p.m.
Crankshaft material	drop forged steel
Number of bearings	7
Main bearing diameter	3 in.
Length—Ends	3 in.
Intermediates	1 1/2 in.
Camshaft material	carbon steel
Drive	Colson gear
Tappets, type	mushroom
Piston material	iron or aluminum
Number of rings	4
Piston pins, type	full floating
Intake valve material	chrome nickel
Diameter of head	2 1/4 in.
Exhaust valve material	Silchrome
Diameter of head	2 1/4 in.
Valve lift	.455 in.
Ignition, type	double distributor
Lubrication, type	full pressure
Carburetor	Two Scheblers
Starter	North East

weighted crankshaft rotates in seven bronze babbitt-lined interchangeable bearings. Connecting rod bearings are removable but shimless. Camshaft bearings are bronze, pressed into base casting and pin bearings are bronze bushings.

Cylinders are cast in block of semi-steel iron, while the detachable head, made of the same material, is cast in pairs. Pistons are cast iron for speeds up to 1800 r.p.m., but aluminum is recommended for higher speeds. They are fitted with three compression and one oil ring.

Lubrication is full pressure, the system including a main oil line of seamless steel with connections to bearings by tubes and compression fittings, a filter element and a by-pass which provides against stoppage and freezing. Oil is delivered direct to main, camshaft bearings, sprockets and accessory drive. From main bearings lubricant is delivered through crankshaft to connecting rod crank-pin and wrist-pin bearings. Water for cooling is passed into the cover over openings in side of cylinder and is distributed by an inside passage throughout the cylinder, from which it is passed through holes into the heads and then to the radiator.

The battery system of ignition is employed. While magneto is optional it is not recommended if electric starting is used. Two spark plugs per cylinder are used. Fuel is supplied from two carburetors with hot spots directly above. Heat control may be manual, semi- or full automatic.

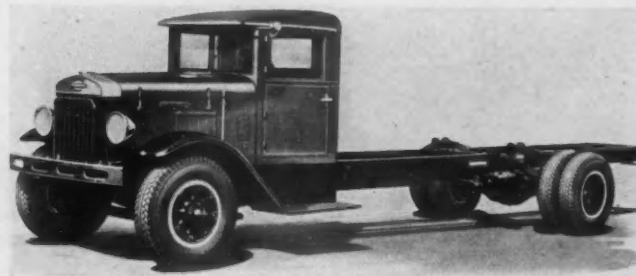
I. H. C. DRESSES UP "W" MODELS IN NEW STYLE

Offers 2½ and 3½-Tonners
in Four Extra Wheelbases

Specifications of New I.H.C. Models

Model	W-1	W-3
Capacity	2½ ton	3½ ton
Engine, size	4-4½ x 5½	4-4¾ x 5½
horsepower	53.5 at 1800 r.p.m.	60 at 1800 r.p.m.
Transmission, make	own	own
speeds and mounting	5-unit	5-unit
Service brakes	4-wheel, Bendix front, Eaton rear	
Hand brakes	rear wheels	rear wheels
Rear axle, make	Eaton 54	Eaton 78
type	full-floating	full-floating
drive	double-reduction	double-reduction
ratio	6.85 to 1	7.85 to 1

For more specification details, see table starting on page 65.



Showing the attractive front lines of the new I.H.C. 3½-ton W-3 model equipped with an inclosed cab

I.H.C.'s new 2½ and 3½-ton chassis, designated as Models W-1 and W-3, have been modeled to attract observers by smart lines and to impress them by their power. Rugged yet pleasing looks have been built into the units by the strong, square effect of the two-piece hood, spread of the cowl to fit cabs, low and broad fenders which sweep easily to short running boards, broad bumpers attached to the frame, husky radiator guards, chromium-plated radiator shells and improved all-steel cabs. The specially constructed cabs, available fully or three-quarter inclosed, carry through the streamline effect of the front end and have rounded corners, narrow pillars and a curved roof tapering gracefully into a visor.

Both models, offered in one standard and four special wheelbases, are equipped with four-cylinder Hall-Scott overhead-camshaft engines, five-speed transmissions, Eaton double-reduction axles and four-wheel mechanically operated service brakes.

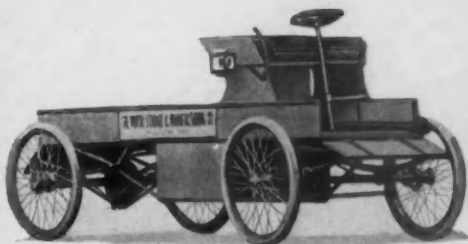
The powerplant of the lighter model comprises a 4¼ x 5½ in. engine, single-plate clutch and five-speed transmission of own design. The components of the larger unit are similar but larger, including a 4¾ x 5½ in. engine. Both models also are alike in the following respects: Cooling system, thermostatically controlled, includes fin-and-tube type radiator; fuel is fed from 29-gal. capacity tanks by vacuum to Zenith carburetors; ignition is furnished by Robert Bosch high-tension magnetos; governors are centrifugal and built in; propeller shafts are one or two-piece, the latter with self-aligning center bearings, according to wheelbase; universals are of the four-trunnion cross and two-yoke type; steering gears are worm-and-sector type, and wheels cast-steel spoke type.

Final drive is furnished by spiral-bevel and herringbone-type double-reduction rear axles with a 6.85 to 1 ratio in Model W-1 and 7.85 to 1 in the W-3. The four-wheel service brakes consist of Bendix on the front wheels and Eaton on the rears. Emergency brakes are located in the rear wheels. Springs are semi-elliptic, the rear of which are supplied with auxiliaries.

Pressed steel channel frames are employed on both models. In the lighter model side rails are 7 x 3 x ¼ in. assembled with seven cross members in the 130-in. wheelbase job and eight in all others. The 130 and 148-in. wheelbases are also furnished with 3/16 in. inserted channels. Longer wheelbase units, 170, 185 and 200 in., have tapered angle sections, 10 x 3¼ x ¼ in., riveted to outside of side rails. The frame of the 3½-ton model is 8 in. deep and ¼ in. thick, braced with channel and tubular cross members.

Standard equipment includes oil filter, air cleaner, electric head, tail and dash lights, generator, horn, bumper and radiator guard.

Cabs equipped with curtains and windshield wiper, are furnished as special equipment. Other items of special equipment include electric starter, power take-off, speedometer and bodies for every need. Oversize solid or pneumatic front and single or dual pneumatic rear as well as balloons can be supplied.



The original truck built by Gramm



TIME

THE DEVELOPER OF TRUCK TRANSPORTATION



Modern panel job built by Gramm



GRAMM • THIRTIETH ANNIVERSARY



This photo taken in 1900 shows B. A. Gramm, pioneer truck manufacturer, and his son Willard.

GRAMM'S Thirtieth Anniversary in the Truck Industry! We can well afford to pause a moment to review the past. Sentiment is not dead. There are always friends to enthuse in success and encourage in adversity. Happily Gramm has had success. Thirty successful years in the truck industry is sufficient evidence to guarantee that. Fortunately Gramm has many friends to enthuse in his success. Perhaps the greatest single factor in winning so many friends has been his constant effort, since the inception of the industry, toward **STANDARDIZATION**.

During the first twelve years of Gramm's existence as a builder of motor trucks, or from 1900 to 1912, he designed and manufactured practically all units and parts that entered into the construction of his product, as there were few independent parts to be obtained. Practically all of the units had to be originated, and many of the designs created then, are followed today by successful chassis builders. From 1912 on, he fought steadily for the standardization of parts with a vision of properly assembled trucks, which would reduce costs of construction and establish the cost of service parts to the user. Through a National Association of which B. A. Gramm was President for four years, the parts makers were encouraged to standardize more and more, so that parts could become interchangeable. The successful interchangeability of parts today is to an appreciable extent due to these pioneer efforts.

The manufacturers whose products are shown on the following pages are contributing to the success of Gramm just as Gramm is contributing to their success. What could be a more fitting tribute, on this Thirtieth Anniversary of Gramm than for truck manufacturer and parts manufacturer jointly to tell the Truck Industry the story of **STANDARDIZATION**—of good parts—and good trucks?

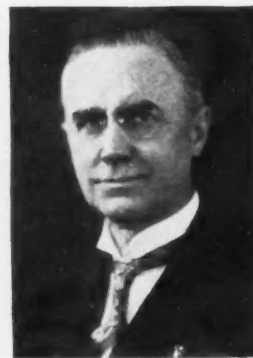
GRAMM MOTORS, Inc.

Builders of fine Motor Trucks, Vans and Coaches

DELPHOS, OHIO, U. S. A.

Left: Willard Gramm in 1930, Vice-President and Chief Engineer, Gramm Motors, Inc.

Right: The B. A. Gramm of today. President and Treasurer of Gramm Motors, Inc.



Y THIRTIETH ANNIVERSARY • GRAMM

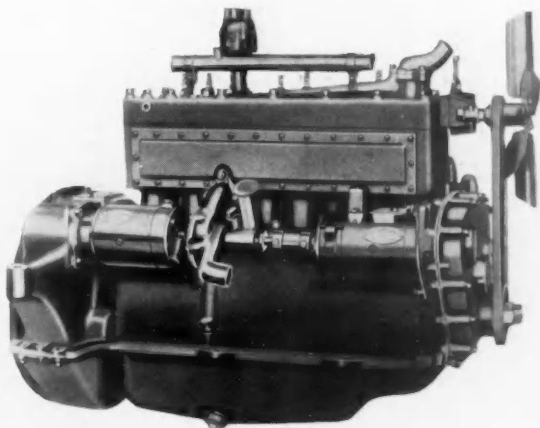


**Nothing *Finer*
Can Be Said of Any
Motor Vehicle Than,
It is -**

**POWERED
BY
LYCOMING**



The famous Logan runabout produced by B. A. Gramm in Chillicothe in 1907. This photograph was taken with Burton E. Stevenson, famous author, who at that time was Secretary of the old Logan Construction Company.



Of a commercial car, the same as of a passenger car, an airplane or a motor boat, nothing finer can be said than—It Is Powered By Lycoming. For Lycoming is dedicating its vast resources, experience and skill to establishing and maintaining leadership wherever gasoline engines do the world's work. A practical expression of this can be found in Gramm Trucks powered by Lycoming Engines which are setting entirely new standards for heavy duty motor performance.



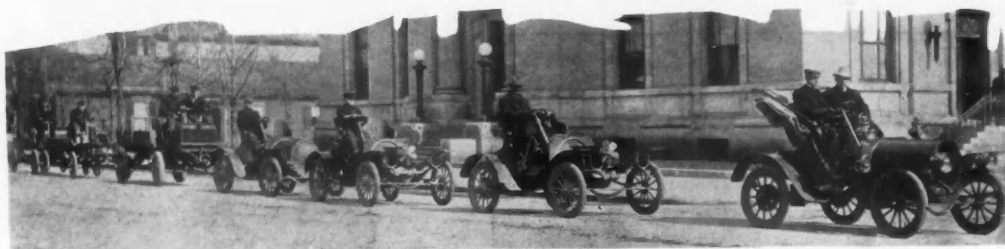
A Great Eastern Line bus produced by Gramm.

Lycoming Manufacturing Co., Williamsport, Pa.

LYCOMING
MOTORS



GRAMM • THIRTIETH ANNIVERSARY

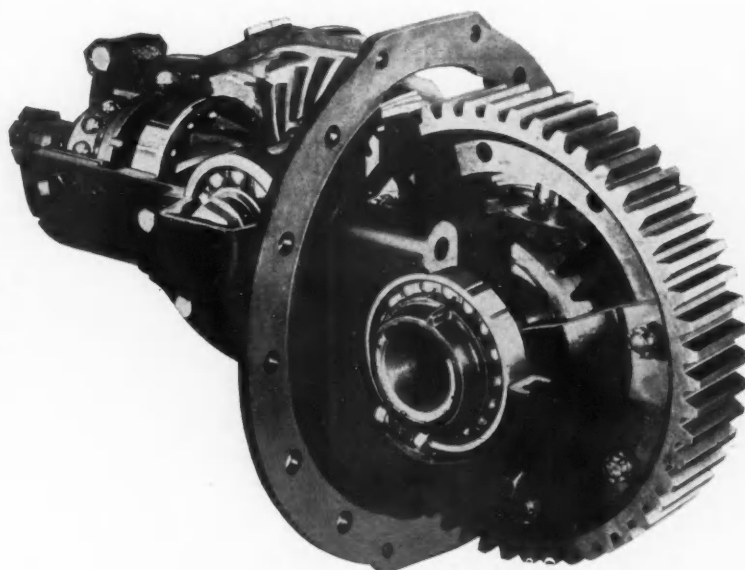


A parade of early Logan air-cooled passenger cars and trucks. While B. A. Gramm also made passenger cars, his first product was a truck, and he always manufactured trucks at the same time he was making passenger cars. This photograph was made in Chillicothe, Ohio, in 1906.

WISCONSIN AXLES

Double Reduction Drive and the name Wisconsin are synonymous. The Wisconsin Axle Company was first in making this type of drive available to the truck manufacturing industry and is now its largest producer.

Gramm Motors, Inc., specified Wisconsin Axles on their line of heavy duty trucks and buses, because in design, materials and workmanship they measured up to Gramm standards. Those who buy Gramm-Wisconsin equipped trucks realize long life, sturdy performance and low operating cost. And those who sell Gramm trucks are rewarded with the buyer's good will.



A fleet of heavy duty Gramms delivering ice to First National Stores.





FOR
BETTER
RELIABILITY++



Modern ice cream delivery job produced by Gramm

— the PIONEER TRUCK BUILDER STANDARDIZES ON ERIE WHEELS



Measuring up to the highest standards of truck construction, Erie Wheels are furnished by automotive manufacturers who have found that it pays to furnish the best wheel obtainable.

"The Wheel of Today and Tomorrow"

AFTER 30 years devoted to the development of automotive transportation, President B. A. Gramm appreciates the improvements that assure greater Safety, Reliability and Convenience.

Three years ago this pioneer builder of commercial motor vehicles, to maintain his high standard of construction, standardized on Erie Dual Wheels, the pioneer spoke-type duals.

The development of this type of wheel by Erie Malleable, back in 1926, made possible the use of dual tires on light types of trucks—with the wheels priced in line with other low-cost units.

And kept ahead, by constant improvement: Erie Dual Wheels reduce brake drum heat considerably through the fanning action of the spokes. Tires run cooler, which means better mileage. The exclusive aligning ring simplifies mounting and dismounting, and tires run true.

Department C

ERIE MALLEABLE IRON COMPANY

Automotive Wheel Division
ERIE, PENNA., U. S. A.

ERIE
WHEELS—DRUMS



GRAMM • THIRTIETH ANNIVERSARY

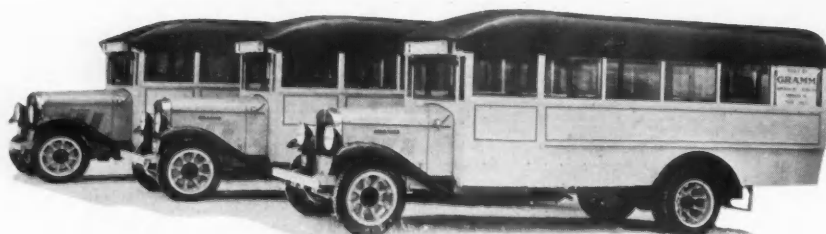


Probably one of the first trucks ever sold to Procter & Gamble. This is a Logan produced in Chillicothe, Ohio, in 1906.

The millions of Timken Axles have been of every type; for every kind of motor vehicle. Front axles and rear axles; for motor cars, trucks, buses; rear axles of chain, double-reduction, bevel and worm types—Timken experience has been all-inclusive. And every Timken Axle was built to Perfection—not to a price.

There never has been and never will be any change in the Timken purpose to build the best axles that engineering skill, long experience, and painstaking craftsmanship can produce.

Gramm Series B-C-D-E-EY-EYB are equipped with Timken bevel gear rear axles.



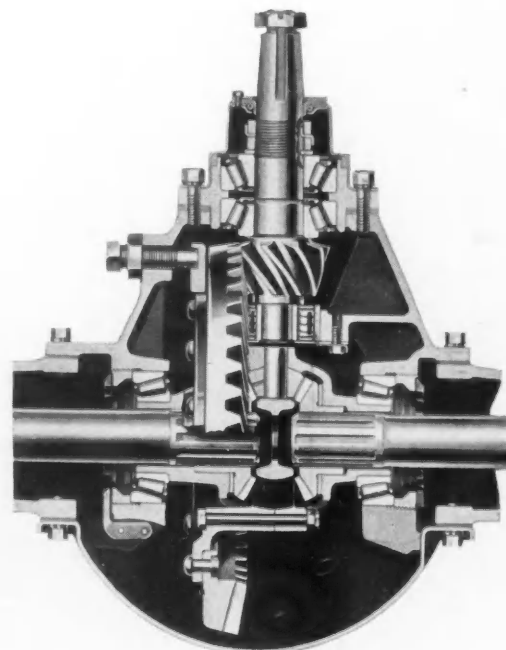
A fleet of three buses operated on the streets of Troy, Ohio, mounted on special 1½-ton Gramm chassis.

WHEN anybody mentions axles, you think of "Timken."

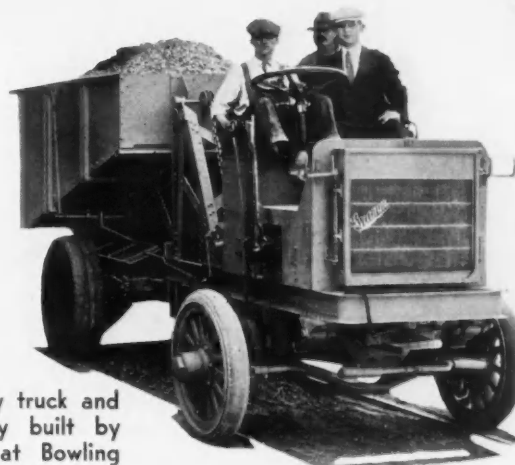
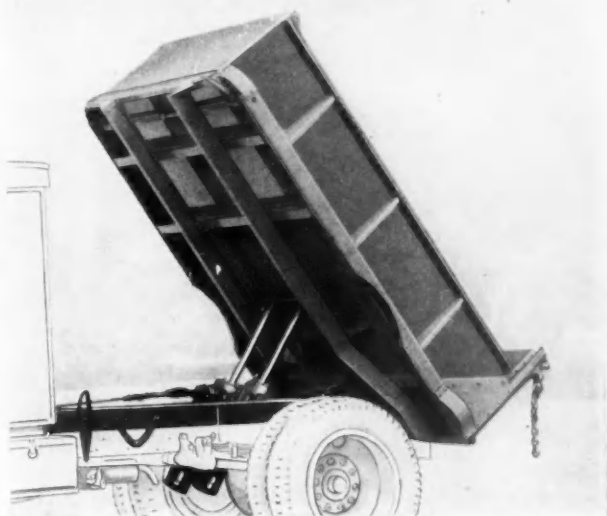
That's quite natural.

Since 1901, throughout automotive history, Timken Axles have stood for all that was sturdiest and best in axle design and construction. "Timken Axles" has always been a complete answer to all questions about axles.

In 1901 the first "Timken Roller Bearing Axles" were built into those queer-looking old pioneer motor cars. Today the Timken-Detroit Axle Company is the oldest and the largest manufacturer of axles in the world.



THIRTIETH ANNIVERSARY • GRAMM



Heavy duty truck and dump body built by Gram at Bowling Green, in 1911.



PRODUCTS

Heavy Duty Hydraulic Hoists
Light Duty Hydraulic Hoists
All-Steel Dump Bodies
Blade Snow Plows
Compartment Truck Tanks
Heiloy Metal Milk Tanks
Bulk Storage and Underground Storage Tanks

Subsidiary Companies Manufacture "Combustion" Oil Burners for Domestic and Industrial Heating Purposes and "Milwaukee Air Power Water Systems" for farms and suburban Homes.

Branch Offices

NEW YORK, BOSTON, PHILADELPHIA, DETROIT, CHICAGO.
Distributors in all key cities

ORGANIZED in 1901, The Heil Co. has grown up with the motor truck industry and now occupies an outstanding position as a manufacturer of twin-cylinder Hydraulic Hoists, All-Steel Dump Bodies and Compartment Tanks for motor trucks.

Heil Hydraulic Hoists are quick-acting, powerful, dependable. In from 10 to 15 seconds the Heil Hoist will raise the body and dump the load at idling speed of the motor. The Heil Hoist installation is clean-cut. The oil pump, being an integral part of the hoist, eliminates the necessity of exposed oil lines. The hoist rotates in its saddle trunnions to exert direct lifting effort against the load at all angles of the dumping operation. Every Heil Hoist is sold over a written two-year guarantee against defects in material or workmanship.

The new Heil dump truck equipment catalog will prove interesting—write for your copy today.

THE HEIL CO.

MILWAUKEE

WISCONSIN



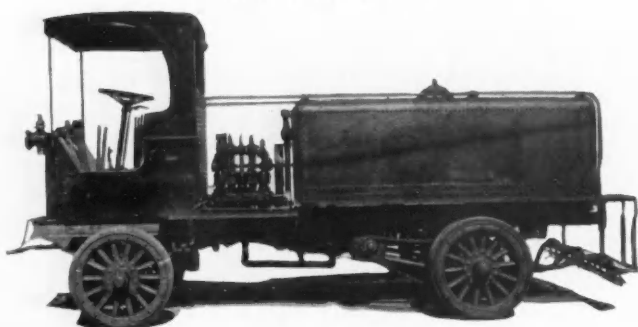
A fleet of four special 11 1/2-ton dump trucks with road grader attachments produced for Hardin County, Ohio.

HEIL HYDRAULIC HOISTS FOR DUMP TRUCKS



GRAMM • THIRTIETH ANNIVERSARY

An ancient type of Gramm road oiler produced in Bowling Green, Ohio, in 1910.



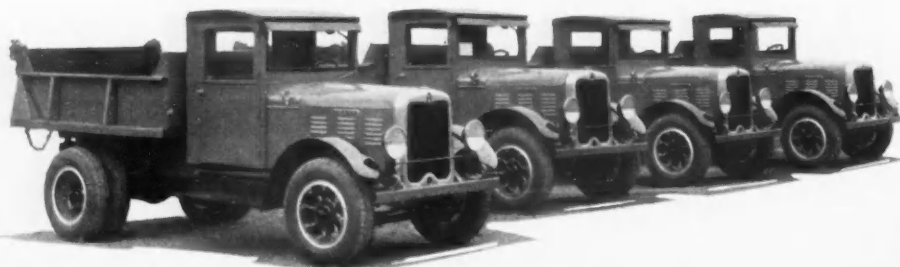
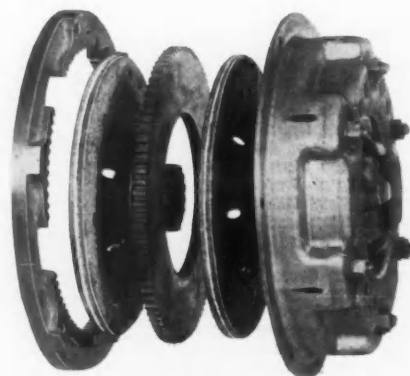
TWENTY-FIVE years of Research and Experiment has produced for the Motor Car World the JONES CLUTCH.

Down through the avenues of Motor Car Progress, those engineering brains—that dynamic force composing the Jones Organization—has kept the pace—many times far in advance of the age; first, the old Band Style Clutch, next the Cone Type, then the Multiple Disc, and NOW that Universal, Powerful, exacting, and yet, simplified JONES CUSHIONED SINGLE and DOUBLE PLATE CLUTCH.

Jones Clutch & Gear, Inc., feels proud of the privilege to congratulate Gramm upon this, their 30th Anniversary. Gramm,

known for keen aggressiveness, selects only the finest and most practical products as standard equipment, and the progress that makes this 30th anniversary, makes Jones two-fold proud to be identified as the Gramm source for Clutch requirements. Jones Clutches are manufactured under the most ideal Factory conditions, with the last word in Modern Equipment. Service is the watchword, and is secondary only to Quality.

Jones Clutches add dignity where adopted as Standard Equipment — because — JONES CLUTCHES mean PERFECT PERFORMANCE, and HIGHEST EFFICIENCY.



A fleet of three-ton dumps recently delivered to the State of Ohio Highway Department.



The adoption of Lockheed Hydraulic Brakes by 87 leading truck and bus manufacturers such as Gramm is positive and concrete evidence of Lockheed's superior performance and of the high place Lockheed Hydraulics occupy in the motor truck field.

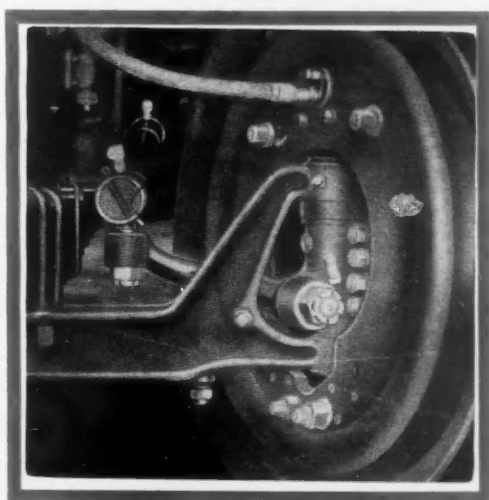
Always progressive—always seeking out the utmost in quality and value, it was only natural that Gramm should turn to Lockheed for its braking equipment.

Only in Lockheed could Gramm find such efficiency, safety and ease of handling.



Probably one of the first bakery delivery wagons built. This is a Gramm, produced in Bowling Green in 1909.

Proven by long years of demonstrated ability and service under every and all hauling and traffic conditions, the Lockheed product is everywhere accepted as the best in braking equipment for motor cars and trucks.



LOCKHEED HYDRAULIC *Four* BRAKES *Wheel*



A modern Gramm 2 1/2-ton wholesale grocery delivery job.



GRAMM • THIRTIETH ANNIVERSARY



Close-up view of one of Post-Dispatch fleet, produced in Chillicothe in 1906.

GRAMM CHASSIS of latest design have been developed from the thirty years' experience of B. A. Gramm. In this length of time it has been possible to weed out ideas which have not finally benefited the user and substitute others of more decided merit.

The cut out and reinforced frame construction here illustrated makes possible an extremely low frame height. Full Floating Axles contribute their share towards the success of Gramm trucks.

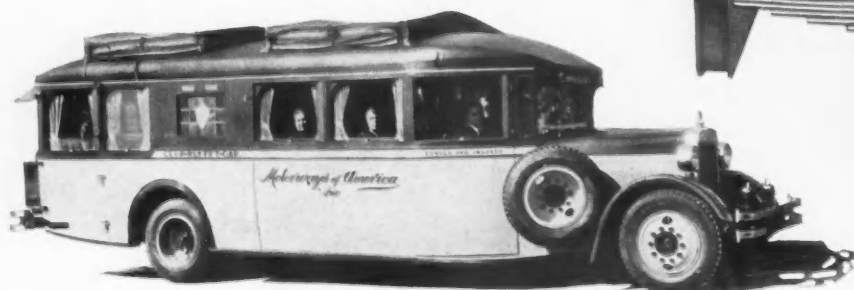
Note particularly the spring design. Extremely long length results in easy riding. The helper spring is mounted on top, the ends engaging—after light loads have depressed the main spring—husky cast steel brackets. Gramm uses cast steel because it wears longer.

The springs are so graduated that the body and a light pay load are joltlessly carried on the main section. The helper springs come into play only with heavy loads. Every leaf of every Gramm spring is specially heat-treated chrome-vanadium alloy spring steel.

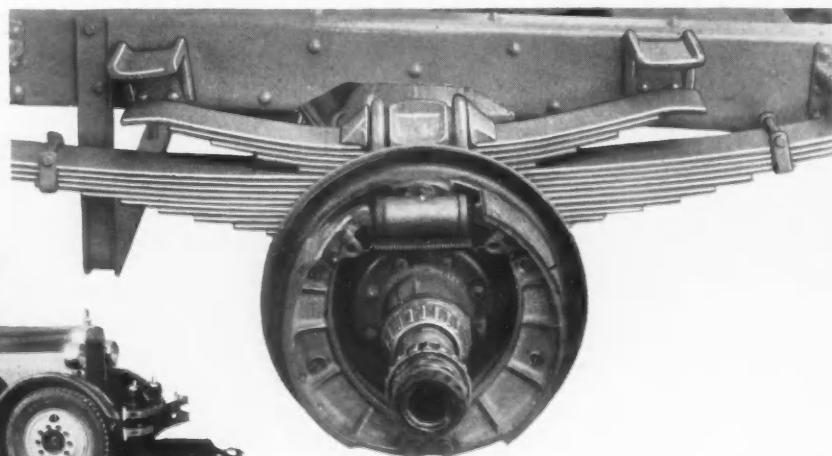
Mr. Gordon Mather, President of Mather Spring Co., Toledo, Ohio—that pioneer producer of chrome-vanadium springs—is responsible for the design and production of all Gramm springs.

These springs cost more than ordinary carbon springs—yes—but the customer reaps the reward—he doesn't have spring breakage.

Mather Springs are quality springs.



One of the long-distance buses produced by Gramm, photographed at Kennilworth Inn, Asheville, N. C.



THIRTIETH ANNIVERSARY • GRAMM



FULLER TRANSMISSIONS PROVED BY 28 YEARS PERFORMANCE

Proved performance has made Fuller America's largest exclusive builders of commercial car transmissions.

Large experience in heavy duty hauling since 1902 enables Fuller engineers to build long life and satisfactory performance into every transmission.

Fuller & Sons Manufacturing Company have devoted 28 years exclusively to the building of fine transmissions for commercial motor vehicles. Like Gramm we have been known for our initiative and aggressiveness in foreseeing the require-



Gramm-Logan van produced in Bowling Green in 1909.

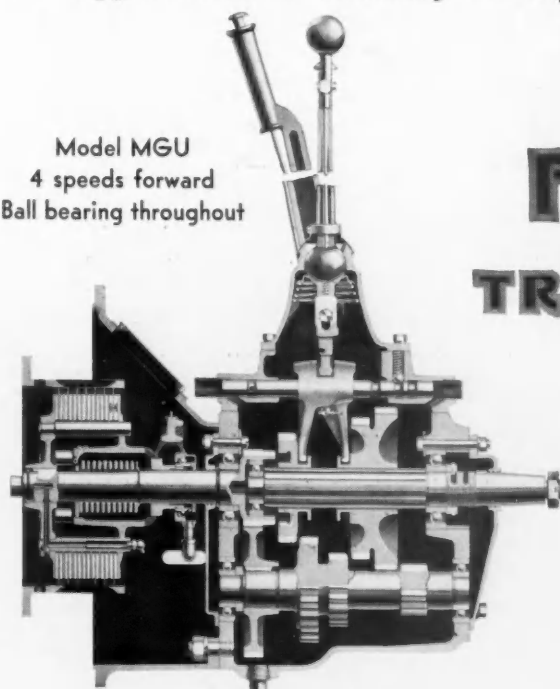
ments of such development and having pioneered many of the outstanding improvements in heavy duty transmission.

We have furthered the development of the power take-off, in the use of which Gramm trucks have been notable since 1903.

Fuller transmissions used in various models of Gramm trucks have proved their quality after many years performance. Fuller Engineers will gladly consult on any transmission requirement.

FULLER & SONS MANUFACTURING COMPANY
Division Unit Corporation of America
Bankers Bldg. Milwaukee, Wis.

Model MGU
4 speeds forward
Ball bearing throughout



FULLER STANDARD AND SPECIAL TRANSMISSIONS



Modern 1000 cu. ft. van now manufactured by Gramm Motors, Inc.

FROM ROUGH BILLET

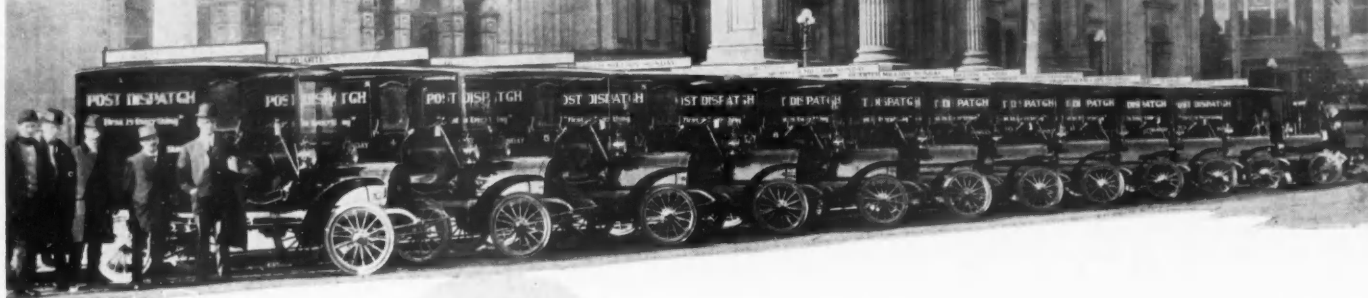
TO FINISHED PRODUCT





GRAMM • THIRTIETH ANNIVERSARY

30 YEARS AGO



A fleet of Logan air-cooled panel delivery trucks built at Chillicothe, Ohio, in 1906, probably the first fleet ever produced.

and **NOW**



The first of two fleets of Firestone-equipped Gramm Trucks for Ohio State Highway Department.

GRAMM has been building trucks for 30 years. Firestone has been building tires for 30 years.

Thirty years of progress!

And since the first Gramm Truck left the factory, back in 1900 Firestone Tires have been standard equipment.

They are 100% standard equipment of Gramm Trucks today.

And small wonder! For Firestone Gum-Dipped

Tires hold all world records on road and track for safety, speed, endurance and mileage. They equip the world's longest bus line 100%. They are sold to taxi cab and bus lines in greater volume than tires of any other make.

They will reduce your operating costs and cut down your overhead. Increased profit!

Firestone Rims also have grown up with the Industry. They were selected for the first Gramm Trucks and have been used as 100% equipment ever since.

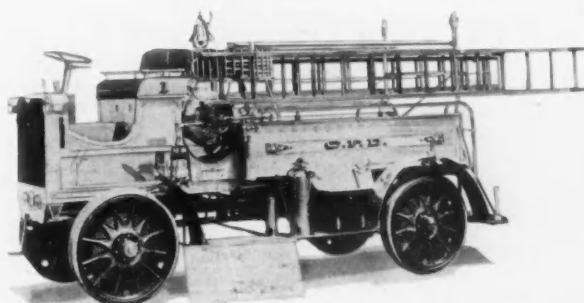
Firestone

Y THIRTIETH ANNIVERSARY •• GRAMM



VASTLY BETTER
because better in each detail

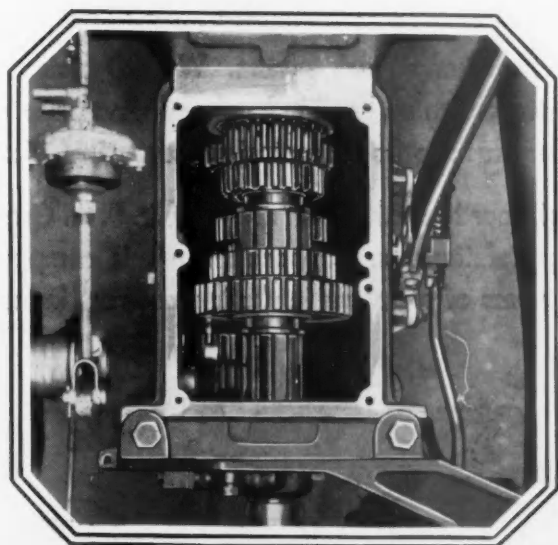
COVERT GEARS



Gramm - Logan chassis supplied from Bowling Green in 1909 to the Anderson Coupling & Fire Supply Company, Kansas City.

THE name of Covert on a truck transmission case means the builder of that truck has gone all the way toward insuring efficient, enduring transmission of power in his product.

Gearsets by Covert of Lockport, N. Y., are cut and inspected and matched in sets a shade more accurately than most. They are a bit wider of face, and painstakingly heat-treated to almost wear-proof hardness. Shafts are heavier than usual, and are carried in ball bearings generously oversize.

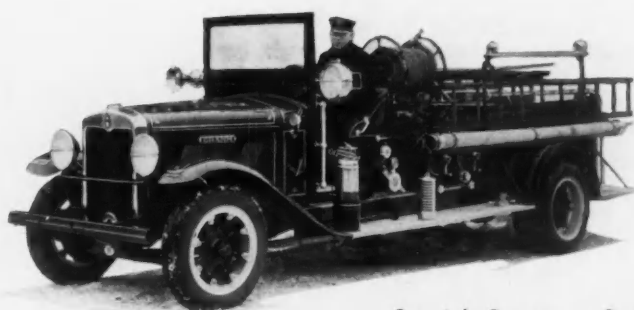


Covert 4-speed transmission and multiple-disc clutch.

It is the sum of these things that has won for Covert gearsets the esteem of engineers everywhere.

COVERT GEAR & MFG. CORP.
Lockport, New York

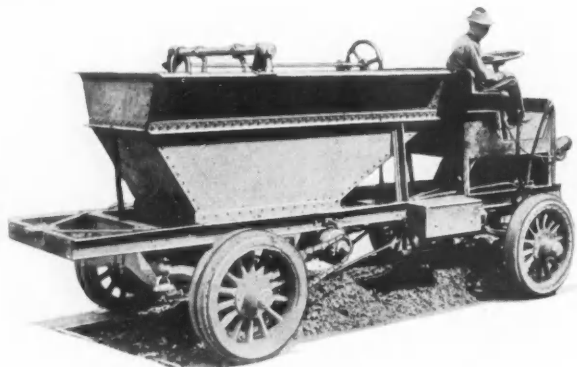
Export Dept.—44 Whitehall St., New York City



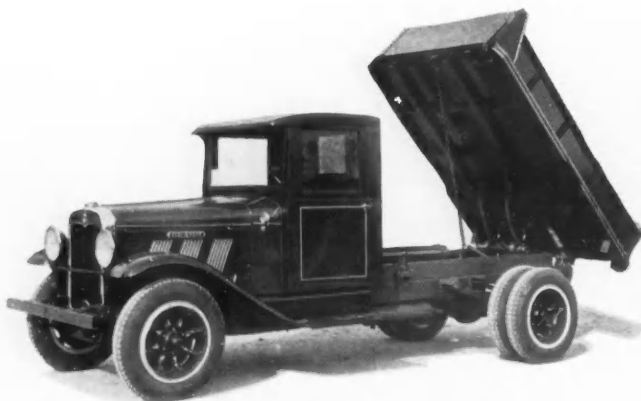
Special Gramm fire apparatus chassis. Gramm specializes in this work and offers chassis suitable for 500, 600, 750 and 1000 gallon jobs.



GRAMM · THIRTIETH ANNIVERSARY



Twenty years ago, this Grammm chassis with a hopper body was the last word in road-building equipment.



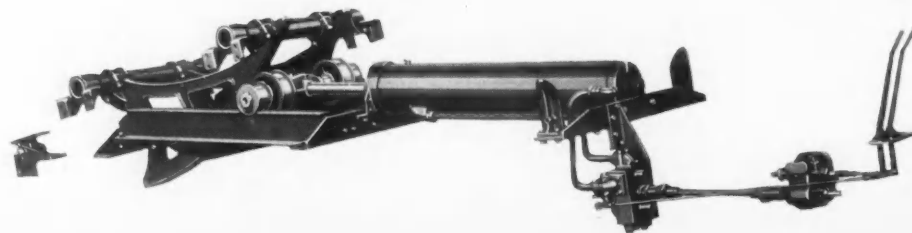
Grammm series D 2 1/2-ton chassis, equipped with a Wood underbody hoist and all steel dump body—a roadbuilding unit of 1930.

MORE THAN 18 YEARS OF RECOGNIZED LEADERSHIP MADE POSSIBLE THIS GREAT NEW LINE OF HYDRAULIC UNDERBODY HOISTS

The unchallenged leadership of Wood still goes on. Now, we offer a new and still greater achievement—the Wood slant type hydraulic hoist. Every known improvement, every known refinement in up-to-date hydraulic hoist design has been included in these improved models. Years of experience working out dumping problems for literally thousands of truck owners have taught us how to build hoists as supreme as these for universal needs. Select any one of these outstanding hoists with confidence. It will deliver more rugged power, more solid satisfaction, more trouble-free performance than any hydraulic hoist built.

WOOD Hoists and Bodies are pioneers in their field and for more than eighteen years have faithfully served the needs of Dump Truck owners. WOOD Hoists and Bodies have grown up hand in hand and developed with the Motor Truck to its present high state of efficiency.

As one pioneer to another, we offer to Mr. B. A. Gramm our congratulations on the occasion of his completion of thirty years of endeavor in the Motor Truck industry.

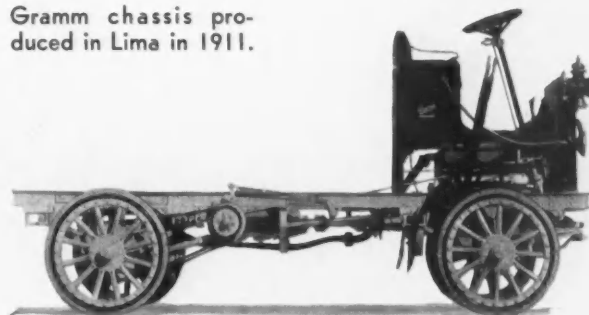




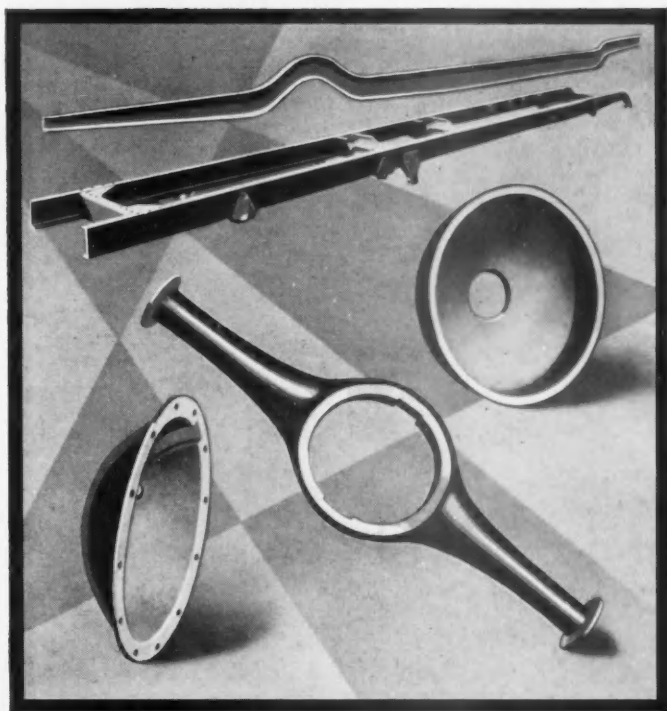
It is a well known fact that a successful business likes to be connected with successful businesses. Perhaps that was the beginning of the association between Gramm and Truscon. For each of these organizations, in their independent fields, has served for more than a quarter of a century.

No organization can live and thrive for this period of time without a continuous effort to provide the utmost in value and service. To us it has been a pleasure to supply that hidden but fundamental unit—the frame—to Gramm for many years. The fact that Gramm trucks and busses have won an outstanding reputation for reliability and durability is a matter of pride to Truscon. It indicates that our contribution to the Gramm truck has lived up to that standard which every Truscon product must meet—complete satisfaction of the purchaser.—Truscon Steel Company, Pressed Steel Division, Cleveland, Ohio.

Gramm chassis produced in Lima in 1911.



TRUSCON FOR PRESSED STEEL

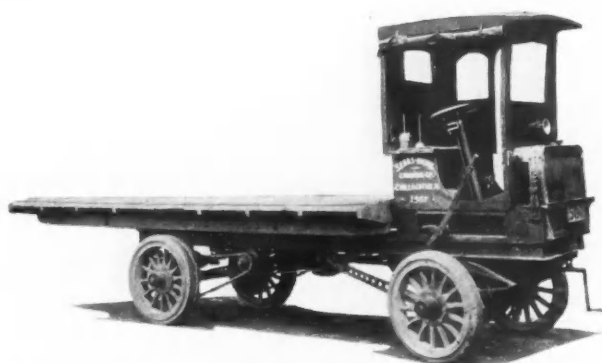


Special fire apparatus chassis for hook and ladder equipment. Note very long wheel base. Gramm specializes in fire apparatus chassis.





GRAMM • THIRTIETH ANNIVERSARY

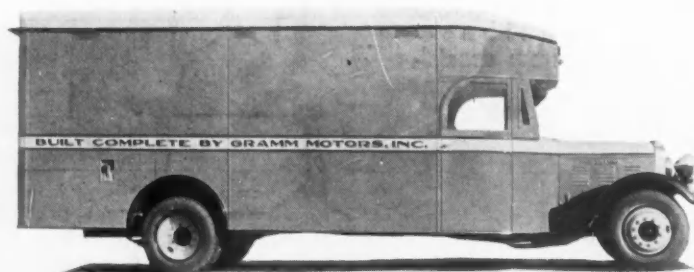


One of the earliest Logan heavy duty trucks produced by Gramm in Chillicothe in 1907. Sold to Sears-Nichols Canning Co. of that city.

FOR twenty-five years, Continental has met the power requirements of Gramm. The association has been a mutually happy and profitable one. As Gramm progressed through the succeeding years, the name it gained naturally caused comment on the power which propelled it. As Continental swept on to fresh achievement in every field where gasoline power is employed, its universal reputation for dependable power just as naturally became a vital factor in Gramm's increasing sales and Gramm's ability to maintain unusual standards of performance.

In the light of modern engineering, it is

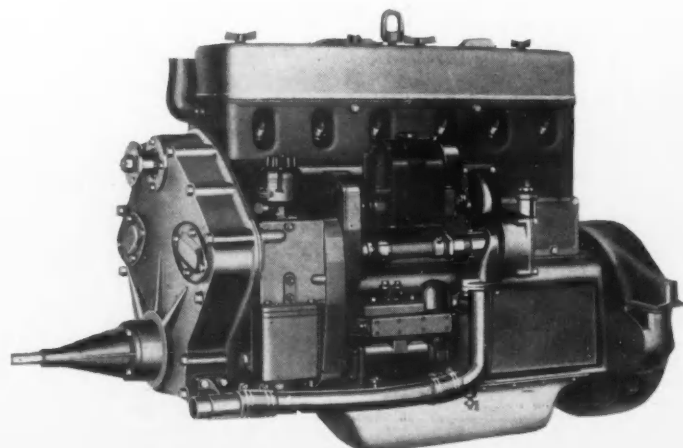
Modern 1000 cu. ft. van. Body and chassis built complete in the Gramm shops.



CONTINENTAL ENGINES

pleasant to recall the early days of pioneering effort, when Gramm and Continental, hand in glove, set out to conquer the problem of hauling by motor for profit. It is pleasant because, tracing the record of the intervening years, it is immediately apparent and undeniably evident that at every step in the development of gasoline power Continental has held admitted leadership.

Today Continental dominates its field in the design, development and application of gasoline engines in many varied fields. In the specific instance of Gramm, Continental engines are now an integral part of the latest specialized fire apparatus and drop frame van and bus chassis. And in every line Continental forges steadily ahead under the banner which bears the phrase that is a fact—"Dependable Power for every purpose."





BENDIX "Duo-Servo" BRAKE

"SERVO" is a vital Bendix principle which utilizes the momentum of the moving vehicle for braking power.

This principle is found exclusively in Bendix Brakes.

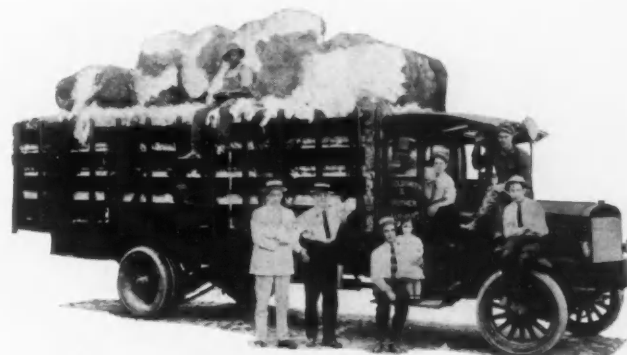
The Bendix Duo-Servo Heavy Duty Brake is more simple and more powerful than any two shoe brake hitherto developed. It is "Servo" both forward and reverse.

Adjustments are longlasting and easy to make.

Simple and rugged in construction—positive in action—easy to service—Bendix Brakes are the greatest safety factor in automotive transportation.

BENDIX BRAKE COMPANY
South Bend, Ind.

DIVISION OF BENDIX AVIATION CORPORATION



A truck produced by B. A. Gramm in Lima in 1912. Seven-ton chassis specially designed for carrying baled cotton in the South. Probably the first six-cylinder, heavy-duty job built in the United States.

"Servo"
both forward
and reverse



A modern Grammm 2 1/2-ton van job.



GRAMM • THIRTIETH ANNIVERSARY



Trouble Proof Performance

In selecting Blood Brothers Universal Joints as standard equipment for this important link in the Power Transmission System of Gramm Trucks, Gramm Motors insures the users of its trucks the utmost in trouble proof and durable universal joint performance.

Although invented at a time when the automotive industry was in its infancy, the original principles of design and proportions of the Blood Joint have proven so satisfactory that such changes as have been made have been confined to minor details and refinements as suggested by experience. We feel justly proud of this record which signifies a design of real merit.

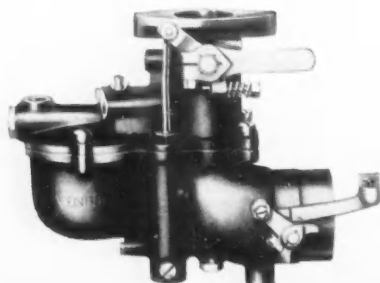


Modern heavy duty
4-ton Gramm chassis.

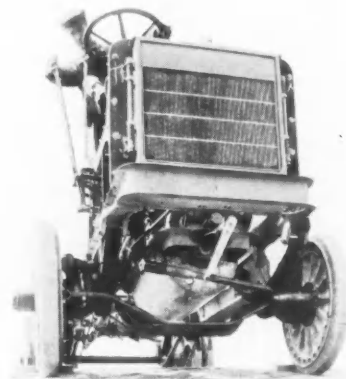
ZENITH CARBURETORS

Closely paralleling Gramm's progress in the commercial automotive field is that of the Zenith-Detroit Corporation.

Zenith pioneered the plain tube principle of carburetion and the heavy-duty type of carburetors so necessary in the commercial car field. Constant study of carburetion problems has resulted in added improvements that meet the ever increasing range of use and efficiency of motor trucks.



Gramm, like most other leaders in the industry today, standardizes on Zenith heavy-duty carburetors. Only a quality product could continue successfully over three decades, and Zenith is aiding Gramm maintain the highest standards.



Front view of heavy duty Gramm
produced in Lima in 1911.

THIRTIETH ANNIVERSARY •• GRAMM



30 YEARS YOUNG! **SKF** CONGRATULATES GRAMM



For thirty years Gramm has been producing automotive equipment. Today, it reflects the natural growth which inevitably follows in the wake of far-visioned business pioneers who established their enterprise on something more than shifting sands . . . the standards of quality, serviceability and honest value.

As Gramm starts its 31st year, **SKF** extends its heartiest congratulations and feels proud of the share **SKF** Ball Bearings have played in making Gramm equipment dependable.

During the past twenty years, **SKF** has also followed the same ideals. And today, "The Highest Priced Bearing in the World," is still the cheapest in the long run.

SKF INDUSTRIES, INC.

40 East 34th Street, New York, N. Y.

SKF

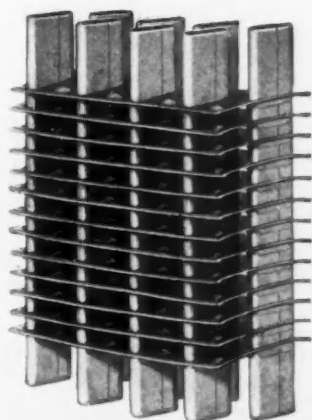
PERFEX RADIATORS

Adequate cooling is one of the fundamental principles in the successful operation of internal combustion engines. An efficient radiator is more important in a truck than in an automobile, because a truck engine uses a greater proportion of its available power and works under stress more often and for longer periods at a time.

A truck with a poor radiator is like a horse with the heaves. When a truck is forced to be idle, not only the truck and its attendants are affected, but the industry which it serves . . . profits suffer all along the line. One of the things that make Gramm trucks, vans, busses and

specialized fire apparatus chassis profitable and dependable to use is the Perfex Radiator.

Perfex Radiators were chosen by Gramm after exhaustive tests and careful comparison. Having specialized in heavy-duty radiators for twenty years, Perfex knows thoroughly the requirements of a truck radiator to give efficient cooling and uninterrupted service. The Perfex Plant has grown with the truck industry, ever increasing its facilities, equipment and engineering skill. Perfex Radiators typify the stamina and efficiency which characterize Gramm trucks through and through.



1. Large non-clogging water passages.
2. Large non-clogging straight air passages.
3. Reinforced hard copper cooling fins that hold their shape.
4. Staggered tubes and turbulators that give additional cooling efficiency.

Latest Gramm van. Quite a difference from the earliest models.





GRAMM • THIRTIETH ANNIVERSARY



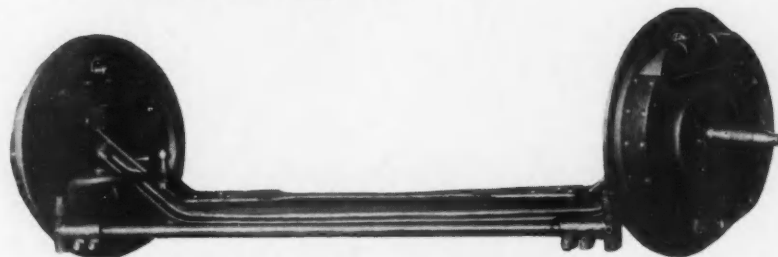
The famous Lake to River test run. B. A. Gramm drove the car, which was an air-cooled runabout, produced by him at Chillicothe, 1906. The trip was from Toledo to Portsmouth, Ohio, and had to be made from 5.00 A. M. to 7.00 P. M. without stopping the motor, a real accomplishment in those days.

COLUMBIA UNDER THE CAR
MEANS DEPENDABILITY

THE COLUMBIA AXLE COMPANY
CLEVELAND, OHIO

CONVENTIONAL TYPE COMMERCIAL VEHICLE FRONT FOR 1½ TO 2½ TONS

Columbia Axles have been selected and used as standard equipment by many of the better commercial vehicle manufacturers during the past fifteen years. It has of course been necessary during this time to anticipate as much as possible the improvements demanded by the increasing use of motor vehicles in the commercial field. Today, we feel that Columbia Axles embody in design and material those qualities demanded by the severe service to which the average commercial car is subjected.



THIS year B. A. Gramm celebrates his Thirtieth Anniversary of constant association with the motor truck industry. Many of the fundamental features now common in motor truck construction are the result of ideas he originated in years past. Many standardized parts makers today acknowledge the encouragement he gave them years ago in the way of suggestions and patronage.

In 1930 Gramm offers to the public in celebration of his Thirtieth Anniversary the highly developed line of Gramm chassis, including straight frame models from 1½ to 7 ton capacity; double drop frame van and bus chassis of all sizes; specialized fire apparatus chassis designed to suit the individual requirements of any fire apparatus manufacturer.

In these designs—all new—will be found the most advanced developments of Gramm engineers—the radiator lower tank of cast construction eliminating the majority of possible leaks—the low frame construction so that bodies may be mounted closer to the ground, saving time and energy in loading and unloading—the method of front shackling which has eliminated wheel wobble and kick—a degree of driver comfort seldom attempted. In short Gramm's gift to the public this Thirtieth Anniversary year is what we believe to be the greatest truck values ever offered at the price.

It is impossible in this space to give you any real conception of the magnificent creations offered. Dealers! here is your real opportunity and B. A. Gramm personally invites your careful inspection.

GRAMM MOTORS, INC.

Builders of Fine Motor Trucks, Vans, Busses, Specialized Chassis for Fire Apparatus
DELPHOS, OHIO, U. S. A.

EXPORT
WILLYS EXPORT CORPORATION
TOLEDO, OHIO, U. S. A.

EXPORT
WILLYS-OVERLAND CROSSLEY, LTD.
STOCKPORT, ENGLAND

IF THE RAILROADS GO STORE-DOOR DELIVERY

CONTINUED FROM PAGE 31

door service in the United States, not because the service was not desirable, but because as operated in these cities it constituted discriminatory situations which violated the Interstate Commerce Act.

● British Cartage Service ●

The railways of Great Britain have offered a cartage or store-door freight service ever since there were railroads in that country. After the World War the 120 railways of Great Britain were amalgamated into four large systems and cartage was continued as a vital part of the railway service. The Railways Act passed by Parliament in 1921 provided that the railways may collect and deliver by road any merchandise which is to be or has been carried by railway and make reasonable charges for the cartage service in addition for the charges for carriage by railway. The charges for the collection and delivery services must be published and kept in the rate book at the railway goods stations at which the services are performed. The Railway Rates Tribunal of Great Britain has jurisdiction over the cartage charges.

Store-door freight services are performed under the auspices of the railroads in virtually all of the important cities and larger towns of eastern Canada. The charges are published in the railroads' terminal tariffs, and the service is performed in connection with both carload and less-than-carload freight, excepting certain restricted articles, including bulk freight, dangerous articles and pieces of unusual sizes and weights.

Most of the freight is carted in the vehicles of cartage contractors under the liability and responsibility of the railway companies. The service is extended to all shippers and consignees except those who have notified the railways of their intention to do all their own trucking.

The revival of interest in store-door freight service in the United States is due primarily to the need of improving the terminal handling of freight and to increase the load efficiency of the motor and horse-drawn vehicles used in terminal cartage.

In a nutshell it is urged that store-door freight service will result in:

1. Quicker freight movement.
2. Greater economy to the railroads.

3. Greater vehicle load efficiency.
4. Better terminal handling of freight over station platform.
5. Economy in railroad freight-station platform space.
6. Relief of terminal vehicular congestion.
7. Reduction of street congestion in the vicinity of freight depots.
8. Improvement in railroad freight station facilities through the substitution of new, modern terminals in outlying sections and the elimination of older freight stations scattered throughout the larger cities.
9. Possibility of reductions in terminal cartage charges, and
10. Possibility of reduced total transportation charges due to economies in terminal handling.

● Available Store-Door Service ●

Store-door freight services are now available to shippers and consignees in the United States offered by the Railway Express Agency, Inc., a number of steamship lines and the freight-forwarding and car-consolidating companies which collect the less-than-carload shipments of a number of shippers, consolidate them into carload or container lots, ship them as carloads or container loads to destination by railroad or steamship and perform store-door delivery services at destination.

A number of obstacles and difficulties must be overcome before store-door freight service becomes an established actuality upon a national basis.

In the first place, schedules of rates for terminal cartage or store-door freight services must be worked out. These rates must be satisfactory to shippers, railroads and the trucking interests. Arrangements must be made for the publication of these rates so that the charges may be known to those who use the services.

Second—The opposition or indifference of certain shippers and consignees must be overcome.

Third—It must be determined whether the service is to be optional, to be used only when shippers or consignees elect, or automatically performed in connection with all shipments unless the shippers or consignees elect to do all of their trucking with their own vehicles.

Fourth—The delivery and pickup zone limits and trucking charge zones must be laid out in each terminal so as to avoid unjust discrimination and unreasonable preference.

Fifth—It must be determined whether the transfer or drayage charges are to be included in the through rates or published as separate rate factors.

Sixth—A decision must be reached with respect to the freight to be included or excluded from the service, and whether both carload and less-than-carload shipments are to be included, or only less-than-carload shipments.

Seventh—The policy of the carriers pertaining to places of pickup and delivery, time of delivery and pickup, free time, arrival notices, handling of freight to be picked up or delivered above or below the street level and similar details must be carefully worked upon bases satisfactory to the shippers, consignees, railroads, steamship lines and motor carriers.

Eighth—Arrangements must be perfected so as to provide for the cartage charges at the shipping and receiving points to be paid for or borne by the shippers or consignees depending upon the basis of sale. This, of course, is a commercial arrangement that can be solved satisfactorily by the buyers and sellers of the goods.

Ninth—The rival railroads and steamship lines must work out satisfactory arrangements to preserve or improve competitive relationships if store-door freight services are established in terminal cities served by two or more competing carriers. It must be determined whether each railroad or steamship line will use its own terminal cartage agent or agents, or whether all or groups of carriers will use the same agencies for performing the cartage services.

● Effect on Truckmen ●

Finally, the place to be occupied by the motor trucking companies in the terminals must be determined. Quite naturally, this phase of the store-door freight service problem interests the operators of motor truck freight facilities most deeply. Many operators are perturbed lest the advent of store-door freight services mean their exit from the profitable terminal trucking field. The experience in Great Britain and Canada should be of value in this connection, for in both countries the railways use the facilities of established and reputable trucking concerns. It is improbable that if store-door freight services are established on a national scale, that the railroads

TURN TO PAGE 60, PLEASE

SERVICE HINTS



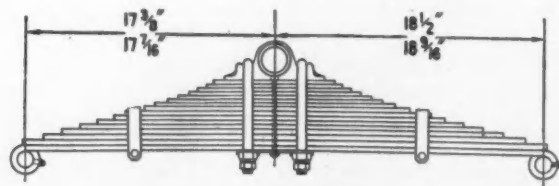
From Shop and Factory

\$5 IDEAS FOR SERVICE HINTS FROM SHOP MEN ARE WELCOME. TELL ALL ABOUT THE IDEA IN SHOP TERMS AND SEND DRAWING OR PHOTOGRAPH. FIVE DOLLARS WILL BE PAID SUCCESSFUL CONTRIBUTORS

Chevrolet Axles

Truck rear axles, which were formerly furnished as parts with axleshaft packing in place, are now supplied without packing. Packing, part number 345774, is to be used on models from 1925 to 1929, both inclusive, and part number 358045 for 1930 trucks.

July, 1930



Ford AA Springs

A new 14-leaf, heavy-duty front spring is now available for Ford trucks which are operated under severe conditions or over rough roads. The new spring is identified by the letter "D" placed on top side of one of the rebound clips.

New spring clips, U-bolts, are required for mounting the heavy-duty front springs. The new clips are about 5/32 longer than standard U-bolts.

Two ends of the rear cantilever spring are not of equal length, and therefore it is possible to install the spring backward. Rear half of the spring is longer than the front half. Dimensions are shown in the accompanying illustration.

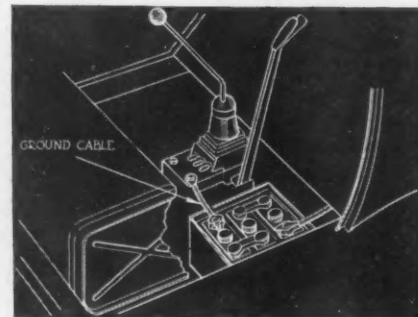
An easy way to identify the spring ends for proper mounting is to place the spring with the lubricator fittings pointing to rear of truck.

Oiling Air Cleaners

Surface adhesion-type air cleaners, commonly called oil-wetted or oil-soaked cleaners, should be serviced at the same time crankcase oil is changed, according to an engineering bulletin of AC Spark Plug Co.

This type of cleaner is effective only so long as there are oily surfaces in the path of air entering the carburetor, and after these surfaces have been completely covered with dust, efficiency of the cleaner drops.

Servicing comprises removing the cleaner, washing it in gasoline or kerosene and reoiling with new oil.



Chevrolet Battery

Battery posts of the 1930 Chevrolet truck are reversed from position in previous models.

Jules Slater, Liberty Garage, Rock Island, Ill., suggests that the standard battery can be used for rental while recharging by grounding the battery with the older type of Dodge Bros. ground cable attached to transmission cover cap screw.

SIX-WHEEL DEVICES STEP UP PAY-LOADS

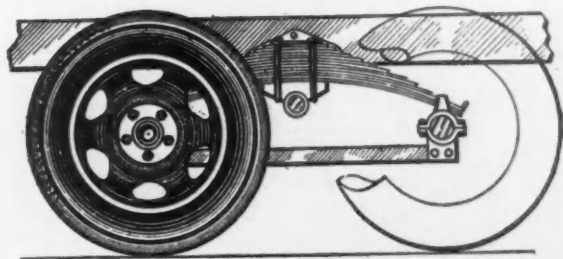


Fig. 1—King-Zeitler

Regular Ford springs with the addition of four leaves are employed in the six-wheel unit offered by the King-Zeitler Co., Chicago. Spring ends are supported on steel rollers carried on the axles. Steel distance bars are placed between the axles to keep the spring brackets in line and to allow flexibility. Ford disk-type wheels, equipped with 6.00/20 in. balloon tires, are included in the list price of \$350.



Fig. 2—Little Giant

The Little Giant, made by Little Giant Products, Inc., Peoria, Ill., for Chevrolets, requires no installation alterations. The unit comprises a 2-in. round dead axle, a compensating lever, an auxiliary spring and a universal swivel bearing. The spring and compensating lever, mounted as a unit, is pivoted on a stub shaft carried in a bracket bolted to the frame. The auxiliary spring end is shackled to the rear end of the truck spring, while the rear end of the compensating lever is attached to the dead axle through a swivel bearing. The extension frame adds 42 in. to the regular truck frame.

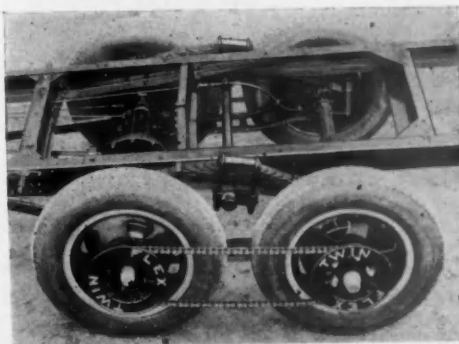
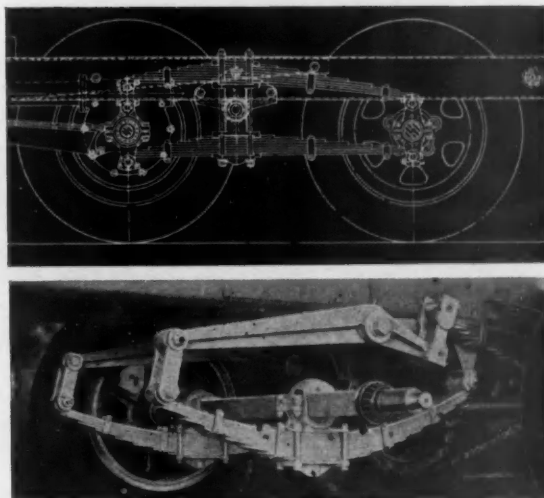


Fig. 3—Twin-Flex

Twin-Flex Corp., Detroit, has added six-wheel units for Fords and Chevrolets. A feature of the unit is provision for chain drive to the extra axle when desired. The regular chassis springs are used, adapted to the requirements of the unit. The springs are trunnion-mounted on a cross-shaft. Front ends of the springs are shackled to the live axle housing and the rear ends are supported on hardened steel rollers carried on the dead axle. The axles are connected by malleable iron radius rods, swiveling on knuckles. Drive to the extra axle is by detachable roller-type chains on sprockets attached to outside of wheels. Duo-Servo type brakes are supplied extra if desired.



Figs. 4 and 5—Fager

Fager six-wheels, products of the Fager Six-Wheel Attachment Co., 3053 California Ave., Chicago, embody two types of design, one for Ford trucks and the other for all makes. The first design (Fig. 4) employs dual eight-leaf, inverted, semi-elliptic springs on each side, which act as cantilevers. The trunnion is mounted on a cross-bar and is placed to throw 62 per cent of the load on the live axle and 38 per cent on the dead. Front ends of the springs attach to the live axle housing and the rear ends to a patented ball-joint oscillator to compensate for load and road irregularities. Distance between axle centers is 42 in. In the second design (Fig. 5) an extra set of springs are correlated with the original spring action of the truck. The six-wheel unit is secured to the chassis frame by a large 24-in. bracket, which serves as an added frame support as well as a solid hanger for the front end of the extra springs. The rear ends of the extra springs are attached to the rear ends of the truck springs by beams trunnion-mounted to the frame. The dead axle is mounted above the inverted springs in a compensating unit.



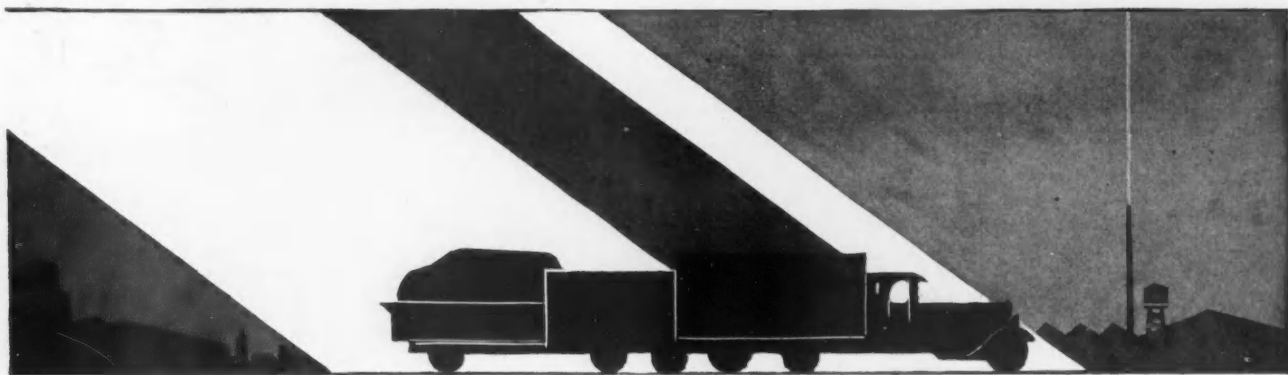
NEW TRUCK SALES

Complete New Truck Registrations for April, 1930, and

			Autocar	Brockway-Indiana	Chevrolet	Diamond T	Dodge	Fargo	Federal	Ford	G. M. C.	Gottfredson	International	La France-Republic	Mack	Moreland	Relay	Reo	Rugby	Schacht	Selden-Hahn	Sterling	Stewart	Studebaker	White	Willys-Overland	Total Sales by States Including Miscellaneous		
ALA.	April 1930	1			280		10		2	197			17	2				3						1	3	4	530		
	4 mos. 1930				1,130		24		4	960			78	2				9							13	10	2,272		
	4 mos. 1929				727		56		6	610			98					14	1						14	7	1,666		
ARIZ.	April 1930				51		11		2	80			7					2					1		1	2	163		
	4 mos. 1930				210		55			387			24	5				11					5	6	3	6	740		
	4 mos. 1929				259		97		5	470			69					15	5				3	20	5	11	1,011		
ARK.	April 1930				156		6		1	214			30					4							7	1	431		
	4 mos. 1930				470		35		2	712			113					11						1	16	8	1,402		
	4 mos. 1929				672		87		5	1,085			194					29	2					2	22	14	2,150		
CALIF.	April 1930	36			634	1	130	35	3	1,511	78		80	26		35	45	123	10			23	8	17	31	11	2,872		
	4 mos. 1930	36			1,697	7	492	123	26	4,994	200		203	36		102	171	313	29			73	21	51	105	48	5,961		
	4 mos. 1929	49	2		1,774	5	890	30	83	5,312	360	12	195	16		148	236	403	50			108	33	65	149	45	9,980		
COLO.	April 1930				141		18		1	223			22					11							5	12	451		
	4 mos. 1930				559		97	1	18	1,001	70		124					37	8						22	50	2,017		
	4 mos. 1929				493		158		5	630	107		140					26	5					6	17	7	1,616		
CONN.	April 1930	8	12		173	8	59		6	325	28		41			35		36	1			3	15	2	6	11	800		
	4 mos. 1930	8	12		435	30	145		14	824	52		105	1		63		84	1		1	4	36	13	22	19	1,969		
	4 mos. 1929	25	25		609	8	230		25	720	94		105	2		103		168	5		1	5	44	24	27	24	2,277		
DEL.	April 1930	5	4		46		1		1	64			9					6							1	1	145		
	4 mos. 1930	19	12		151		1		1	188	26		21					13					2		3	1	449		
	4 mos. 1929	5	1		164		16			201	20		39	1				17	3						9	1	492		
D. C.	April 1930	5			17	2	3		1	85	13		1					10							6	1	136		
	4 mos. 1930	14			91	5	35		4	234	31		15					18							14	1	462		
	4 mos. 1929	4	6		151	21	28			320	20							11	2			2	3	8	8	4	609		
FLA.	April 1930		2		122		9			230	7		10					4							6	1	392		
	4 mos. 1930		20		790		54		3	1,339	26		78					34	3						36	19	2,420		
	4 mos. 1929		7		552	5	35		1	788	20		53	1		12		22						3	13	12	1,531		
GA.	April 1930		5		147		2		5	252	8		8					2						2	7	4	446		
	4 mos. 1930		23		698		50		9	1,097	27		97					12	3					5	43	23	1,564		
	4 mos. 1929		18		966	1	76		1	940	20		42			11		7						3	41	15	2,145		
IDAHO.	April 1930				67		9			123	7		17					4								3	230		
	4 mos. 1930				179		22		1	310	12		30					11	3						3	7	590		
	4 mos. 1929				141		31			168	9		36					9	7						6	1	429		
ILL.	April 1930	8	20		664	54	74		9	956	41		112	2		17		26	2			5	7	3	12	29	2,148		
	4 mos. 1930	37	48		2,720	321	345		66	73	3,592	215	4	748	14		75	14	147	15		48	23	15	84	163	9,142		
	4 mos. 1929	41	67		2,856	478	697		53	69	4,079	372	42	1,044	17		140	30	242	26		48	16	15	113	94	10,545		
IND.	April 1930		22		307	8	39		4	484	54		68					4	17				9	1	1	13	1,045		
	4 mos. 1930		1		1,685	34	184		20	12	2,282	155	348					15	89	6			42	24	26	74	5,116		
	4 mos. 1929		5		89	1,832	30		12	32	2,293	192	343	1				8	152	6			31	33	33	53	5,475		
IOWA.	April 1930				480	2	39		4	506	12		243					22	1					1	5	30	1,354		
	4 mos. 1930		1		1,505	8	86		6	1,322	38		526	1				53	7					3	14	75	3,684		
	4 mos. 1929		14		1,714	6	194		24	1,059	54		503	1		23		86	9					10	12	25	3,752		
KAN.	April 1930		1		487	2	46		8	433	12		66	2				21					7	1	10	15	1,117		
	4 mos. 1930		4		1,127	4	129		16	2	1,067	36	169	5				47	2				16	6	17	59	2,718		
	4 mos. 1929		3		1,127	12	221		13	2	1,059	105	313	2				55	1		1		13	14	44	2,989			
KY.	April 1930		2		225	2	19		1	283	18		41	1		5		5	1					3		7	625		
	4 mos. 1930		22		707	5	71		12	2	845	54	180	2				24	4		14			8	15	22	2,001		
	4 mos. 1929		6		678	14	128		8	699	87		163	2		17		55	4		7		1	11	18	23	1,947		
LA.	April 1930				185		6		1	253	8		33					2							3	2	497		
	4 mos. 1930				658	1	48		1	836	21		110					7						2	21	12	1,745		
	4 mos. 1929		3		650	13	88		2	962	40		116					10						22	8	1	1,945		
ME.	April 1930	2	12		309	3	38		4	422	10		23					13				2		3	1	19	869		
	4 mos. 1930	4	22		581	4	77		5	675	13		40					33						4	3	25	1,508		
	4 mos. 1929		3		416	4	63		2	538	16		16					46	3					8	10	10	1,127		
MD.	April 1930	19	12		218	8	29		3	312	25		62	2		22		24	1		1	1	3	1	25	5	790		
	4 mos. 1930	43	39		676	27	83		8	997	58		149	7		50		63	2		3	6	13	9	54	17	2,385		
	4 mos. 1929	34	6		588	24	130		2	822	79		85	8		84		78	1		1	12	17	3	46	7	2,049		
MASS.	April 1930	29	34		317	21	102		14	10	905	78	57	1		59		58			7	1	24	19	3	35	9	1,849	
	4 mos. 1930	92	63		844	48	277		37	35	2,130	169	233	7		127		143			8	6	36	38	16	73	25	4,481	
	4 mos. 1929	107	70		1,201	32	415		60	40	2,525	276	1	249	64		151		31	6		4	6	44	37	19	102	43	5,741
MICH.	April 1930	3	2		502	10	35		6	20	1,119	59	97	7		2		38	4		3				1	12	17	1,968	
	4 mos. 1930	16	4		1,642	19	173		23	56	3,424	166	13	256	21		27		115	8		9		3	1	23	46	6,137	
	4 mos. 1929		22		2,636	31	392		54	75	4,178	281	13	353	6		35		284	18		1			21	45	79	8,581	
MINN.	April 1930		9		560	11	60		3	4	765	28	129					32							4	12	29	1,659	
	4 mos. 1930		19		1,085	20	131		12	16	1,687	55	274	1				80	5						10	27	64	3,519	
	4 mos. 1929				948	4	130		4	20	1,421	75	252					85	6						12	24	45	3,043	
MISS.	April 1930		1		330		19			329	6		25					5								1	5	723	
	4 mos. 1930		2		880		49			1,019	25		95					7								7	18	2,108	
	4 mos. 1929		5		574		33		1	492	12		56																

Comparative Four-Month Totals for 1930 and 1929

July, 1930



TRUCK INDUSTRY NEWS

GENERAL

Studebaker and Pierce-Arrow trucks will be manufactured and marketed through a newly formed organization known as the S. P. A. Truck Corp. A. R. Erskine is president of the new corporation; J. M. Cleary, vice-president and general manager; J. F. Cotter, secretary; H. E. Dalton, comptroller; C. H. Wondries, vice-president in charge of sales; Hal T. Boulden and Paul H. Caffner, sales managers.

Trucking and hauling companies in the greater Buffalo, N. Y., area are handling approximately 1,000,000 tons of shipping per month, which is slightly in excess of 1929 cargoes, according to Frank H. Kulp, president, Kulp Transportation Lines, Inc.

A thousand motor truck operators recently met under the auspices of Harry Seanor, former president of the Motor Truck Distributors Assn. of Illinois, in Chicago to organize for the protection of highway



J. L. SYDNOR, NEWLY APPOINTED WHITE PACIFIC COAST REGIONAL MANAGER.

freight transportation. The necessity of a defense from political plays on popular prejudice was driven home to the operators, and they declared in favor of regulation and taxation founded on sound economics and engineering.

The Four Wheel Drive Auto Co., Clintonville, Wis., is celebrating its 20th anniversary of corporate existence. From a humble beginning in a rented blacksmith shop, the property of Otto Zachow, the inventor of the basic feature of the F.W.D. truck, the company has expanded until today it covers about 280,000 sq. ft. of floor space and owns property valued at \$1,385,000.

The new Hoover code amendment providing complete reciprocity for all motor vehicles and increased weight limitations for trucks were indorsed at the semi-annual meeting of the National Automobile Chamber of Commerce, Commercial Car Division. Leading truck manufacturers pledged their cooperation in a movement to have the code recommendations incorporated into the motor vehicle regulations of every state.

The American Road Builders' Assn. is arranging an educational exhibit for the American Fair to be held in Atlantic City Auditorium from July 17 to Aug. 27. One division of the

exhibit will show equipment used in the construction, maintenance and operation of roads and another the benefits of good roads.

More than 6000 truck drivers will take part in Chicago's second annual drivers' safety contest to be held during the year starting July 1. The contest, sponsored by the Chicago Safety Council, is designed to reduce accidents involving motor trucks.


FACTORY

The Austin Delivery Car is now under production in the plant of the American Austin Car Co., Butler, Pa. It is to be offered at \$445. Its 2.2 x 3 in. four-cylinder engine of 45.6 cu. in. displacement develops 14 hp. at 3200 rp.m.

International Harvester Co. has added three more new models to its line, namely, AW-1, 1500 lb.; AL-3, 1½ ton, and A-5 truck-tractor model.



A. K. BRUMBAUGH, WHO HAS BEEN NOMINATED VICE-PRESIDENT OF THE S.A.E.



Tick Tock - *death or safety*

Every time the clock ticks off seventeen seconds, another death occurs due to a traffic accident.

On the whole, fleet operators have done their share to reduce this terrible mortality. But much remains to be done. And one of the places where it can be done to best advantage is on the brakes.

What a difference if every bus and truck in the country were equipped with the best brake lining—lining with the maximum dependability; with maximum resistance to moisture, heat, oil, wear-and-tear and all the other things that cause brakes to fall just a little short of the performance that means safety.

The biggest fleet operators use Ferodo Linings. They find it pays; not only because Ferodo Linings last longer, eliminate tie-ups and reduce complaints from drivers, but also because Ferodo Linings are more dependable, hence safer.

Let us tell you more about this.



E-7-30

FERODO AND ASBESTOS INCORPORATED

Manufacturers of Ferodo Bonded Asbestos Brake Lining in rolls, Ferodo Pat. Die-Pressed Brake Segments, Ferodo M-R Lining and Ferodo M-R Brake Blocks.

Factory and General Offices: New Brunswick, New Jersey

"Rislone," a product for use with lubricating oil in crankcases, has been purchased by the Shaler Co., Milwaukee. Capt. Dalton Risley, Jr., Philadelphia, originator of the product, will be in charge of Shaler activities in connection with its production and marketing.

A 24-page catalog, done in water-color treatment and artistically composed, has been put out by the Federal Motor Truck Co. The book gives a complete description of the Federal cab and body line for every Federal chassis.

Diamond T exports for the first five months of this year exceeded by 15 per cent the total for the entire year of 1929, according to C. A. Tilt, president.

Assembly of Ford trucks on a schedule of 150 a day began in Philadelphia during June in the reequipped Ford assembly plant.

F.W.D. reports net increase of 33.87 per cent in business for the first five months of 1930 as compared with the corresponding period of 1929.

The entire plant of the Buda Co. will be closed for inventory and summer vacations from July 28 to August 9 inclusive.

Hercules Products, Inc., builder of commercial car bodies, has



JOSEPH HUSSON
WHO IS NOW TRANSPORTATION ENGINEER
OF VACUUM OIL CO.

added a refrigerator panel job to its line. Large orders are reported from the packing industries in Chicago.

Champion Spark Plug Co. announces the following personnel changes: E. S. Dodge has been transferred from the Denver territory to Michigan with headquarters at Detroit. M. V. Sulzbach succeeds Mr. Dodge in Denver. H. J. Courtice will replace Mr. Sulzbach as Denver territory representative.

Hercules Motors Corp., Canton, Ohio, announces the appointment of the following new distributors: F. C. Richmond Co., Salt Lake City, Utah; The Worthington Machinery Corp. of Tulsa, Okla., and the Alamo Iron Works, San Antonio, Tex.

Receipts of a large contract for Irving and Kari-Keen heating units entailing the manufacture of heater core and tank assemblies is announced by F. M. Young, president, Young Radiator Co., Racine, Wis.

PERSONAL

Fred L. Rockelman, formerly sales manager of the Ford Motor Co., and more recently member of the personal staff of Walter P. Chrysler, has been elected president of the Plymouth Motor Corp.

Millard F. Persons, formerly with the Brockway Co., has been appointed Newark branch manager for the LaFrance-Republic Sales Corp.

Harry B. Moock has joined the Chrysler Corp. as director of car activities.

A. E. Coleman, president of the Coleman Motors Corp., manufacturers of four-wheel-



ALVAN MACCAULEY,
RECENTLY RE-ELECTED
PRESIDENT OF
THE N.A.C.C.

drive trucks, died in his home in Denver, Colo. His death was the result of a long illness.

Clarence W. Dickerson, vice-president and secretary of the Timken-Detroit Axle Co., died July 1 of heart disease. Mr. Dickerson joined the Timken company in 1910 as assistant treasurer. He was also vice-president of the Michigan Mutual Liability Co. and director of the Michigan Mutual Bank. He was 70 years old.

E. L. Mench, Jr., is now associated with the Highway Trailer Co. as sales engineer in the Public Utilities Division. He was formerly special equipment engineer of Dodge Bros. truck division.

A. B. Purvis, president of Canadian Industries, Ltd., of Montreal, Canada, was chosen a director of General Motors Corp. at a recent board meeting.

Charles Borland has been elected president of the Mohawk Rubber Co. to fill the vacancy caused by the resignation of S. S. Miller. Mr. Miller was elected chairman of the Board.

J. B. deCosta has resigned from the White Co., Boston branch, to join the FitzJohn Mfg. Co., Muskegon, Mich., as eastern sales representative.

James H. Holden has been made special sales representative on heavy service tires for the United States Rubber Co., with headquarters in Hartford.

W. A. Coon has been appointed district sales manager at Chicago of the American Hammered Piston Ring Co.

TRUCK INDUSTRY NEWS



There's a Speed Wagon capacity for every hauling need—Wheelbase sizes up to 210 inches

Smart Delivery That Reflects The Character of Your Business

It's not just a delivery truck you put on the streets—it's your advertisement of the character of your business.

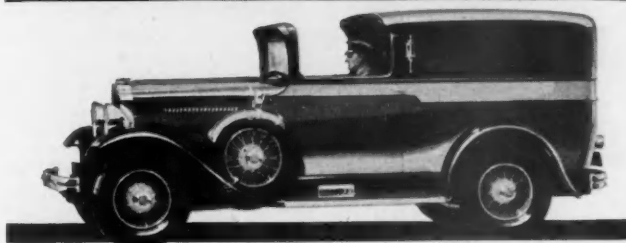
Hundreds see your trucks in the street to one that enters your place of business.

To these hundreds first-class delivery means a first-class business, a first-class service. Second-class delivery means to them the reverse.

No merchant can afford not to have his delivery equipment up to the minute in quality and in appearance.

Any Reo dealer will be glad to show you styles that will fit your business, or he is ready to discuss your problems with you.

REO MOTOR CAR COMPANY, *Lansing, Mich.*



Reo Metropolitan Delivery

A PIONEER LOOKS BACK AND AROUND

CONTINUED FROM PAGE 27

ardization," said Mr. Gramm. "It was an up-hill struggle because of the reluctance of makers of scrap existing production tools and equipment. One of the earliest results of this activity was the standardization of solid tires for trucks so that all makes of tires could be interchanged on the same wheels of a given size."

Overdrive transmissions, Mr. Gramm asserted, first made their appearance in Gramm trucks back in 1909. This unit, providing direct speed in third gear and overdrive in fourth, was originated because of no return loads and higher speed when empty and poor road conditions. He added that the first roller sliding type of rear and front spring mounting was introduced in the same year.

In 1912, Mr. Gramm stated that he brought out America's first heavy-duty six-cylinder truck and exhibited the first commercial vehicle provided with electric starting and lighting equipment. 1914 marked the development of two heavy-duty worm-driven trucks incorporating Hotchkiss drive.

Anticipating the possibility of the United States being embroiled in the World War, Mr. Gramm in 1916 conceived the idea of being prepared with a standardized military truck, a design which would facilitate the production and servicing of thousands of army trucks should they be needed. Experimental models were produced and tested with success on the Mexican border. When war was declared in April, 1917, Mr. Gramm was immediately summoned to Washington, where together with army officials, civilians and delegates from the Society of Automotive Engineers he helped to bring into being the Class B military truck, afterwards known as the Liberty truck. The order for the first official government trucks was awarded to Mr. Gramm's company. These were completed three days before the scheduled time, Oct. 10, and driven to Washington under their own power, where they successfully passed all tests. The company later received orders for 4000. Mr. Gramm was retained in Washington in an advisory capacity during this construction period.

Following the war a new line of Gramm trucks was developed and for several years afterwards improvements in design which, according to Mr. Gramm, were first incorporated in these trucks were gradually adopted

by other manufacturers. Outstanding among these engineering achievements Mr. Gramm enumerated the following: Use of a front bumper constructed integrally with the frame; protection of the tail-light by mounting it as a part of the rear frame member; standardization in design so that four and six-cylinder engines could be interchanged in the same chassis; use of front shackles to prevent wheel wobble, and perfection of two-stage type springs.

Entering his thirtieth anniversary in the automotive industry Mr. Gramm, still innovating refinements in design, pointed with pride to his present line of vans and coaches calling attention to a method of cast radiator lower tank construction, preventing cracking through distortion, low frame construction, and the use of cross tubular stabilizers in double-drop frames to give greater safety when running at high speeds.

The trail which Mr. Gramm blazed through the trackless wilderness of the early days was beset with obstacles and marked by many hardships and heartaches. Mechanical ideas now foundation stones were then considered absurd and unsound; policies once held as radical and impractical, today are accepted as conservative. One of the truck industry's greatest handicaps, in his opinion, was the apathy of its own members in failing to unify its strength and pull together. The truck, he explained, was treated like a stepchild, unappreciated by its own industry and abused by outside interests, which sensing in it a powerful rival of the future fought against it for years. After spending considerable time and money Mr. Gramm in 1912 finally induced the national passenger car association to recognize the economic potentialities of the truck with the result that a commercial vehicle committee was formed. This committee later developed into a distinct truck section of that body and is today doing good work. Similar effort was expended in getting parts makers to coordinate by forming groups according to their units for bettering conditions for mutual benefit. The net result is that over 300 changes have since been made affecting standardization in mountings and improving production and servicing methods.

"Just as the truck industry," Mr. Gramm recalled, after closing his ob-

servations on the lack of cooperation in the early days, "was beginning to correct its various internal disorders and was about to assume its proper place in the modern transportation picture, another evil insidiously made itself felt and threatened to overthrow much of the good work already accomplished. This new foe, equipped with 'small down-payments' and 'long terms', attacked the banking and credit standing of the youthful industry. Not only were thousands of sales made on unsound financing arrangements but were made without any regard to the adaptability of the truck to the job. The misfits, of course, failed, repossessions ran into millions of dollars, manufacturers lost large sums and truck paper smelled to high heaven."

Mr. Gramm again took the lead by refusing to be a party to such practices; mounting the industrial stump he decried continuance of the practice and indicated plainly where the industry was headed unless there was an immediate tightening up of credits.

"While credits today are much improved," Mr. Gramm added, speaking of the present, "I feel that there is room for still more improvement in the future. I advocate more intimate contact with banking interests by attending banking meetings and by acquainting the bankers with all the essential facts pertaining to individual deals such as the use to which the truck will be placed, how it will be managed, and the rate of return for payloads carried."

Citing the views of an Ohio banker, who, while bearish on passenger car paper was convinced that the motor truck industry had 15 years of bright business before it, Mr. Gramm declared that this favorable opinion can only be maintained by careful selling, by fitting the truck to the business and not the business to the truck, by employing sound financing terms and by eliminating ruinous discounts and unreasonable trade-in allowances. He added that while the thought that the selling ethics of the truck business could still be shoved up several pegs, truck paper is gradually swinging back to its former standing as a good risk, in the estimation of bankers, because the truck is an economical necessity. Mr. Gramm was quite vehement in his denunciation of the persons, whether they be truck salesmen, operators or municipal executives, who are responsible for the operation of trucks at rates which cannot show the operator a profit. He deprecated the fact that they not only ruin the operator as well as prospects for more business in the same field, but

TURN TO PAGE 80, PLEASE

The same ease of positive control that has safeguarded world transportation SINCE 1869

The Bendix-Westinghouse Automotive Air Brake brings to modern highway transportation the same sure, effortless control which has played such a vital part in the evolution of the world's foremost transportation systems during the past half century. Just as rail transportation, in its tender years, outgrew ordinary methods of braking, so has the modern motor transport, in its phenomenal rise, reached out for a more adequate control . . . a perfect balance for modern speed, power, and operating conditions. In furnishing this modern control Bendix-Westinghouse offers a thoroughly tested system stamped as a success, through its many adoptions as standard equipment, by practically every leading manufacturer of commercial vehicles.



No longer is the hundred car train brought to a stop with greater ease and certainty than the average commercial vehicle. Bendix-Westinghouse control offers the modern operator a perfect, effortless stopping force regardless of speed, loads, or operating conditions.



Negotiating grades and treacherous routes that are unknown to rail transportation, modern power brakes are an obvious necessity to the present day commercial vehicle. From the mountains to sea level, a descent of thousands of feet in just a few minutes, with truck and trailers under load is just another incident in the day's work of the Bendix-Westinghouse Automotive Air Brake. The accompanying illustration shows just a few of the large air braked fleet of modern motorized units in actual service, which accomplish this task several times daily.

Bendix-Westinghouse Automotive Air Brakes offer the operator of heavy duty commercial vehicles a brake in keeping with modern progress and development . . . A smooth, quick, powerful stopping force which adds materially to the performance of any vehicle.

Should you desire specific data relative to the advantages of Air Brake Control, as applied to your particular type of equipment, a technical staff of trained power brake experts is available to you for consultation. Your request for this service incurs no obligation and should be directed to the BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY, Pittsburgh, Penna.

6278-A

BENDIX-WESTINGHOUSE Automotive AIR BRAKES

Send *a man!*

When there's a man-size hauling job to be done — don't send a boy; send a man!

The Timken Six-Wheel Unit opens up new fields of motor-truck usefulness; effects real hauling economies never before attainable.

greatly increased load capacities

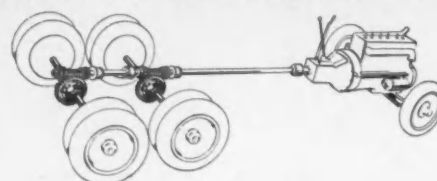
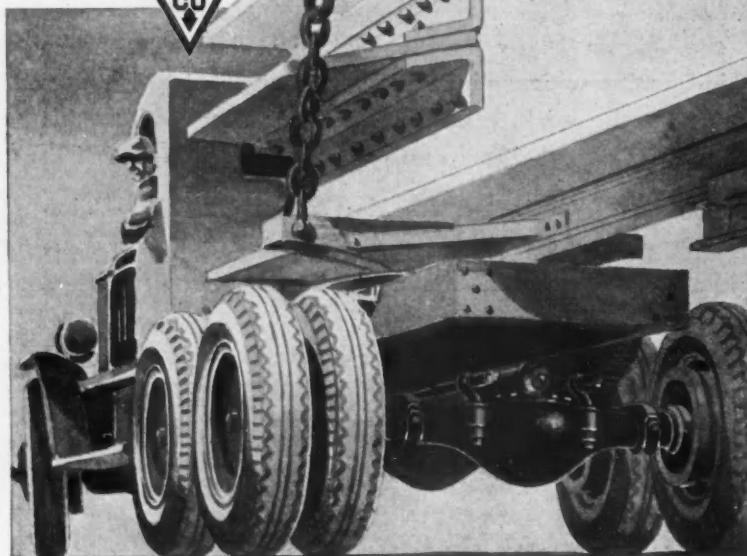
four drive wheels with their redoubled tractive ability

four-wheel or even six-wheel brakes

flexibility that minimizes road impacts; saving wear and tear, prolonging the life of working parts.

These advantages are all inherent in any truck equipped with the Timken Six-Wheel Unit.

THE TIMKEN-DETROIT AXLE CO.
DETROIT, MICHIGAN



TIMKEN SIX WHEEL UNIT

A FOUR-WHEEL WORM DRIVE UNIT FOR SIX-WHEEL VEHICLES

July, 1930

*The Commercial Car Journal
and Operation & Maintenance*

THE ease of handling afforded by the Ross Cam and Lever Steering Gear—plus the durability, long service, and freedom from wear given by its simple, rugged construction—make Ross steering the finest that can be had on any commercial vehicle.

Gramm Motors, Inc., builders of the truck pictured below, have used Ross Steering Gears continuously since 1906

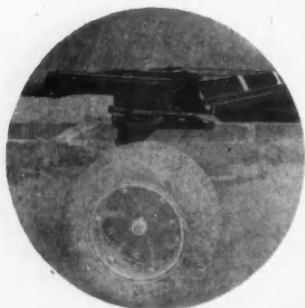


Ross *Cam and Lever*
STEERING

ROSS GEAR & TOOL COMPANY • LAFAYETTE, INDIANA

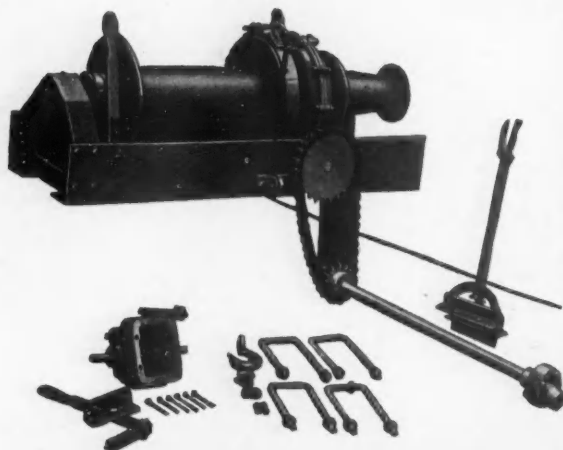
GENUINE Kentucky Trailers and Winches

Model K1 Kentucky Transport Trailer. Low loading height. Fifth wheel swivel. Dual Disc Wheels Timken Bearing Equipped. Alemite Zerk lubrication. 5 ton capacity. Half elliptic under-slung springs. Quick Detachable or Stationary hitch. Low priced and yet a better transport for the exact requirement.



Fifth Wheel Hitch provides maximum swivel with minimum friction. Permits a greater arc of operation with freedom from breaking parts or excessive wear. Simple in construction, yet sturdy and durable. Ideal for trailer illustrated to the right, above.

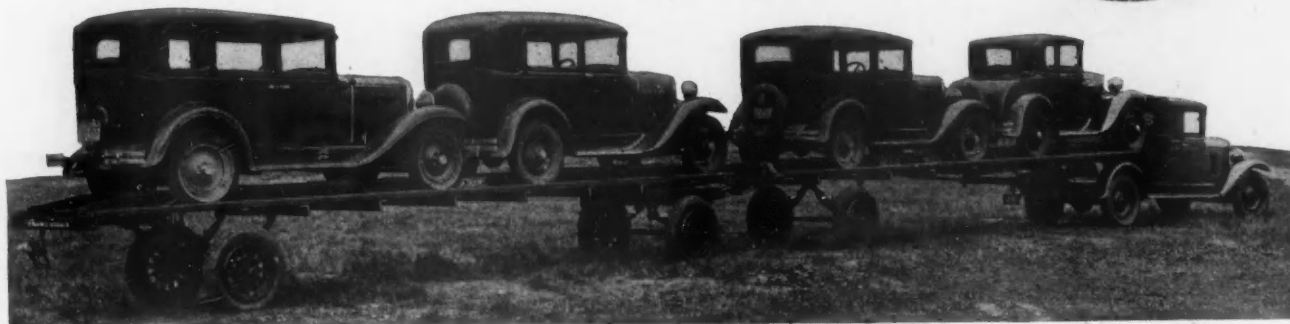
Kentucky Trailer Model K101 2-ton capacity, wooden wheels, Firestone Rims. Fifth wheel hitch (illustrated to left), Timken Bearings, Alemite Zerk lubrication. Semi-elliptic springs. Three capacity sizes. K102 3 ton K104 4 tons. Suggested winch KW75 or KW77. Described in detail in Red Catalog. Write for your copy.



Kentucky Kw-75-77 Winches are built in 3000 to 10,000 capacity. Single or double line. Bronze outer bearings. Timken Bearings in all other places. Alemite Zerk Lubrication. Gears running in oil bath. Power take-off for Fords and Chevrolets. Sizes also for all other make trucks. A winch for every chassis with power for every requirement. See our blue Catalog for details.

Kentucky six wheel double trailer with Pintle Hook connection (illustrated) Firestone Rims. Wood wheels. Alemite Zerk lubrication. Guaranteed capacity. Doubles payload capacity without added expense. Get the complete details on this immediately. It is one of the year's most popular trailers.

The practical Pintle Hook connection as used on the six wheel double transport Trailer. Details and prices of Trailers, Winches and Transport upon request.



Martin Type Fifth Wheel

At Additional Cost

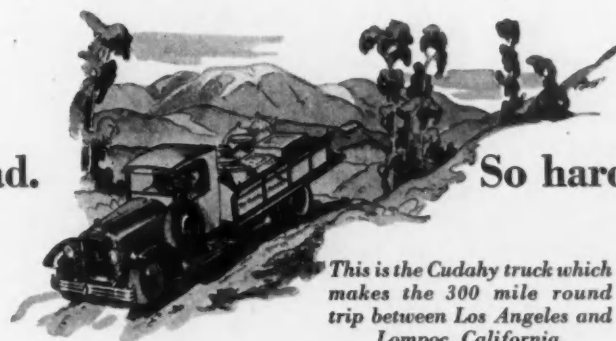
KENTUCKY WAGON MFG. COMPANY

LOUISVILLE, KENTUCKY

ECONOMIC TRANSPORTATION NECESSITIES SINCE 1879

Out on the coast a truck runs from Los Angeles to Santa Barbara

and Lompoc — fast trip, heavy load.



This is the Cudahy truck which makes the 300 mile round trip between Los Angeles and Lompoc, California.

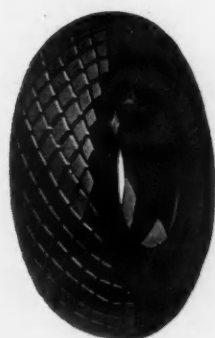
So hard

was the service that high pressure pneumatic tires rapidly failed,

and tire costs were so high that the run was about to be abandoned.

Then Goodyear Truck Balloons were tried. The first set averaged

59,063 miles, with three of the original tires still running.



Cool-running GOOD  YEAR Truck Balloons

Here's the new tire for the new service conditions of the fast, long haul.

stand up magnificently under modern truck speeds. Wouldn't

you like to have such tires on your trucks, too?

Goodyear Truck Balloons are bringing truck tire costs back to levels even lower than they were before trucks stepped up to the speed and traveling range of passenger cars.



Copyright 1930, by The Goodyear Tire & Rubber Co., Inc.

*The Commercial Car Journal
and Operation & Maintenance*

July, 1930

Servicing All Makes Is "Open Sesame" to Profit

CONTINUED FROM PAGE 20

that the Federal Corp. was striving to help him solve his hauling problems. It was a relief to many a fleet owner to find a dealer who could be depended upon to furnish him with a truck that would be of the right type, have the proper speed, be of the right capacity and be fitted with whatever extra equipment was necessary.

Mr. Smith, by the efficiency and courtesy of his service, together with the force of his personality, had made invaluable friends among the truck owners of Atlanta, and they, having found contact with him enjoyable, were eager to continue it. Therefore, a salesman canvassing an owner who was acquainted with Mr. Smith and the service department found a buyer who was friendly toward Federals from the start.

There was still another advantage in this plan of servicing all makes of trucks that was profitable because it eliminated delay in making a sale and saved credit losses. By servicing all makes of trucks the Federal Corp. was able to obtain a credit rating on a much larger number of possible customers and could pass on their accounts with no appreciable delay. The speed with which the Federal Corp. could negotiate a sale became known and was largely responsible for several sales being made when the buyer was forced to buy in a hurry in order to meet an unexpected emergency.

A Peek Into the Future

CONTINUED FROM PAGE 21

for still more silence. Engines formerly made so much noise that minor sounds were unnoticed. But with knocks, taps and rattles overcome, engines give off a "power roar," particularly during acceleration. Many drivers get a big kick out of this sound, as it represents turning loose a lot of power. Cutting down the noise does not reduce power, as engineers discovered by experimenting. Much of the power roar is due to noise in the intake pipe, induced by vibration as in a bass horn. Intake mufflers and deadening of manifolds stops the noise. Passenger car engineers whispered about these inventions during the S.A.E. meeting. Truck engines will respond to the same hush-up treatment shortly, many rumors say.

Blowers helped the 91-in. racing jobs to fame and money at Indianapolis until this year, when the

rules favored piston displacement and barred superchargers. Several engineers predict that blowers will be used on trucks to give large power output without greatly increasing the size of engines. One designer suggests that superchargers be equipped with a clutch and used only on those occasions when a lot of power is required. But several thousand drivers will testify that a lot of power is *always* desired.

A Pioneer Looks Back and Around

CONTINUED FROM PAGE 74

the organization that financed the transaction. The remedy, he said, lays in education and a determined effort on the part of reputable truck manufacturers working in collaboration with bankers to weed out bad selling by refusing credit to ineligible prospects.

Although Mr. Gramm has had little time during his career to concentrate on the sales end of his business he has very definite ideas concerning selling methods and the qualifying attributes of a good salesman. In a recent talk he expounded some very pertinent merchandising fundamentals, excerpts of which follow:

"High pressure methods while successful at the time do not produce resales. * * * Do not talk a customer in and out of a sale. Some salesmen are so full of technical talk that they bore the customer into a refusal. What the customer wants is economical transportation. * * * Be ethical in all your dealings. * * * Never exaggerate what your truck can do, so as to cause a disappointment in the buyer's expectation. * * * Keep your banker's confidence. Discuss with him what you are selling, how you are selling, to whom you are selling, and your customers' credits. * * * If the product is right the price is bound to be, for you can be sure the company has figured competition and has cut the price down to the last nickel. * * *

"Both salesman and buyer ought to know better about big trade-in allowances and stop kidding themselves. It is like a certain sales manager who came home one night and asked his son what became of his dog. The son replied, 'Father I sold my dog for \$10,000.' On his father asking where the money was the boy replied, 'I traded him in for two \$5,000 cats!'

Do not sell a prospect what he wants unless it is the correct size in capacity, wheelbase, gear ratio, tires and proper proportion and distribution load for the body."

If the Railroads Go Store-Door Delivery

CONTINUED FROM PAGE 65

and steamship lines will fail to avail themselves of the well-organized and well-known trucking companies which have developed the good will of powerful shippers and consignees. After all, the shippers and consignees will have much to say in determining the future development of store-door freight services in the United States, for the carriers of the United States are definitely pursuing a policy of "the public be pleased" and not a "public be damned" policy.

A group of leading spokesmen for the shippers and consignees of the Eastern States, members of the Store-Door Delivery Committee of the Atlantic States Shippers' Advisory Board, has recommended that store-door freight service be established first at points where there is an obvious need of increased terminal facilities for the handling of less-than-carload freight, and experimentally at smaller cities before attempts are made to institute the service in the larger cities. Changes found to be desirable or necessary in the experimental stage may be made and the carriers and cartage agents may use the experience gained in the experimental period to develop the technique of this new method of handling freight. After shippers and consignees are thoroughly acquainted with the service, and the proper working relationships have been worked out between the line-haul and terminal trucking organizations, all parties are in position to launch a national program of store-door freight service with adequate service, proper compensation and fair relationship among shippers and carriers. The whole arrangement will doubtless be subject to the jurisdiction of the Interstate Commerce Commission, which will regulate the performance of the service, the charges and the relationship of the railroad and cartage carriers.

The operators of motor truck freight services cannot emulate the ostrich and by ignoring store-door freight service talk assure themselves that it is idle gossip. Revolutionary methods of handling freight in the terminal districts are sure to come, and the motor truck will play a major role in the new systems of terminal and short-haul freight handling. Like the prudent ship navigator, the truck operator must watch the weather gauge for changes in weather and meet the changes with his shop prepared.

If this is a mixed metaphor—make the most of it!

W F

**YOU WANT
PROOF OF
RELAY
SAVINGS**



ASK THE DRIVER

ONE / HALF



the DRIVER FATIGUE

*because
one/half
the blow's in
the back*

HAVE you ever driven your own truck over the highway or through congested city traffic--all day long? Then you know what "driver fatigue" means.

It is the horizontal blows, the fore and aft shocks of starting, stopping and hitting the bumps that does much of the daily damage to driver, to truck and to cargo.

Relay is the only truck that stops these horizontal blows because only with the Relay Pendulum Drive is the truck cushioned horizontally, just as the springs cushion it vertically.

And the same cushioning that saves the driver's back saves tires, fuel and repairs, a total saving averaging 3c each mile traveled.

That's why the drivers pictured opposite can give you proof of Relay savings, at the close of every day's run.

If you drove your own trucks—

Read What the Drivers Say:



LEE J. LEYENDECKER—

Durant, McNeal, Horner Co.,
Chicago, Illinois

"I drive this truck all day on city streets. It is quicker and smoother on starts and stops. My Relay is the easiest riding truck I have ever driven."



SAM MARTIN—

Harrison-Shields Co., Pittsburgh

Stepping down from his Relay after his daily run of 310 miles: "My truck has run 104,000 miles and is good for another 100,000 and probably more. Due to the Relay action it doesn't slip and slide on icy roads. In 22 years of driving I have never found a truck I like to drive as well as the Relay."



WILLIAM T. HAMMERSTEIN—
Scott Brothers, Inc., Philadelphia

"Of all the trucks in our fleet I enjoy driving a Relay because of its easier handling and riding. Driving the Relay is a pleasure."



ANDREW DRINKWATER—

H. C. Bohack Company, Inc., New York

"In driving through traffic from one of our groceries to another, I'm starting and stopping constantly. This is a real test of a truck's performance. My Relay has never given us a bit of trouble."



GEORGE PRANTICH—

Consolidated Cartage and Storage Co.,
Cleveland, Ohio

"My job is hauling semi-trailers from one freight depot to another in Cleveland. In heavy traffic all the time, my work is tough but Relay makes it a lot easier for me and for the equipment with smoother operation and less banging and slamming when hooking up to the trailers."



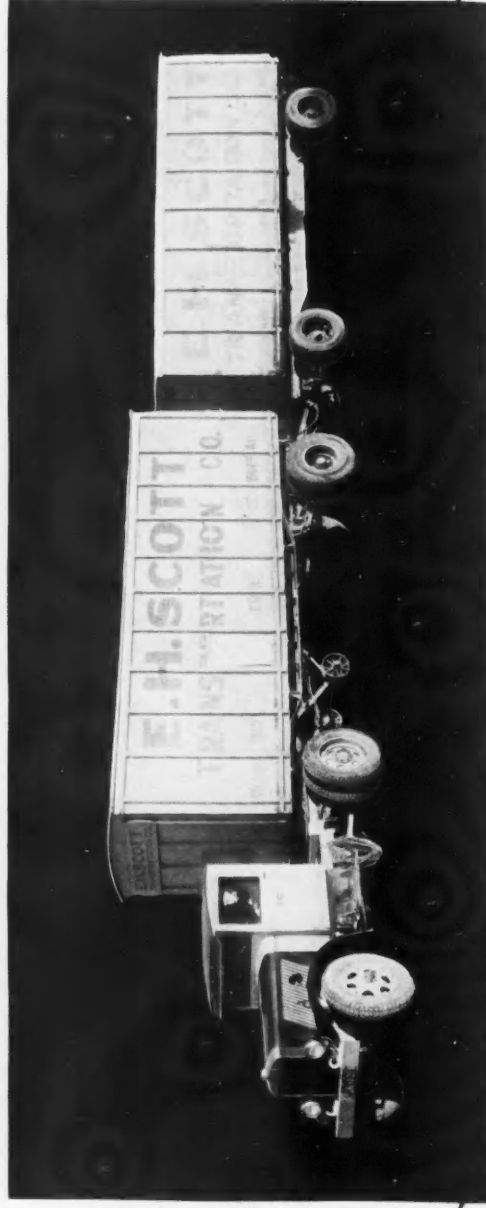
OTTO J. CALL—

E. H. Scott Co., Erie, Pa.

"The job of handling a tractor pulling two trailers with 60,000 pounds of gross load is no snap, but my Relay makes the job much easier because of easier starting and stopping. I can keep my running schedule with less trouble than with any other truck I have driven."

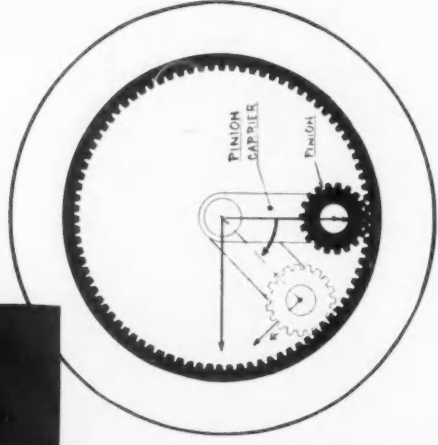
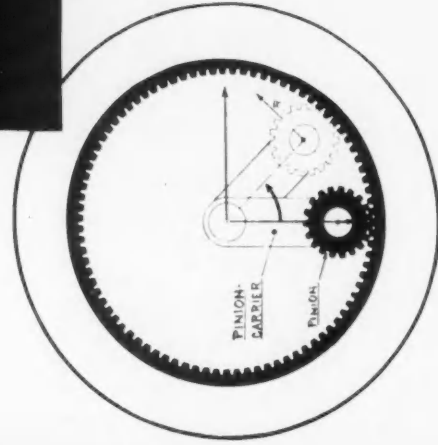
they would be Relays

And Relay Saves the Owner 3¢ per Average Mile



Saves Tires **Saves Repairs** **Saves Fuel**

IN RELAY the driving pinion is free to roll forward and backward, as its carrier swings pendulum-like below the axle center. The entire load moves with the carrier, being thus carried in a virtual cradle of steel over the road obstructions. Tires do not bounce or slide as much as in ordinary trucks. This saves rubber. Horizontal impacts are smothered. This saves repairs. The engine is not over-speeded in starting and there is less wastage of load energy in impacts. This saves fuel. A total saving of 3 cents per average mile. Nearly every large truck operator is investigating Relay today. Write.



RELAY MOTORS CORP., Lima, Ohio

COMMERCIAL CAR JOURNAL

AND OPERATION & MAINTENANCE

TABLE OF TRUCK SPECIFICATIONS

Corrected Each Month From Data
Supplied Direct by Manufacturers

(KEY TO REFERENCES ON PAGE 100)

SIX-WHEELERS are grouped separately in this issue of specification tables so that additional information can be given about these vehicles. An extra column shows which wheels, of the six, are driven. Number of wheels carrying brakes is indicated in the brake column.

Models making first appearance in specification tables include:

American-LaFrance Chief 2½-ton.

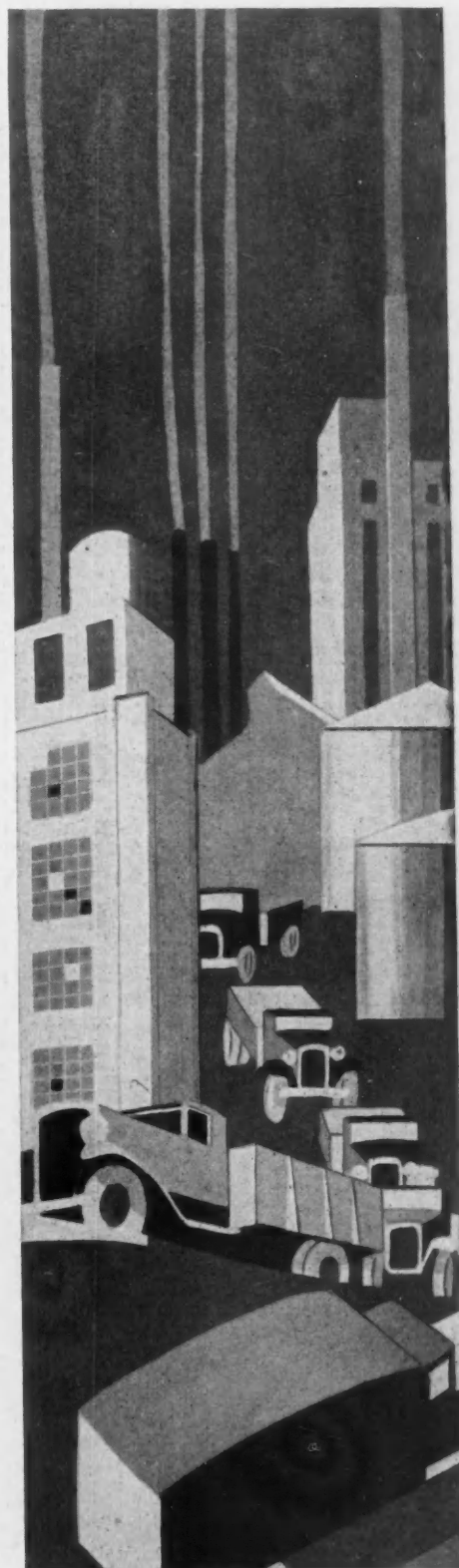
Chicago, new models of 1½, 2, 2½, 3, 4, 5 and 5½ and over ratings.

International Harvester AW-1 1500 lb., AL-3 1½-ton, to be described in the August issue, and the A-5 tractor-truck model.

Reo FH and GD tractor-truck models.

Stewart 40 and 34X 1½-ton.

White 63 2½-ton, 64 3-ton, described on pages 38 and 39 of this issue.



Line Number	Make, Model and Capacity	General			Tire Size		Make and Model	Engine												Fuel System		Electrical System		Line Number		
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)		Front	Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed		Ignition System Make	Generator, Starter Make
1000 Pounds																										
1	Chevrolet Int. Com.	400	107	107		1815	B 4.50/20	B 4.50	Own	6-3 1/2 x 3 1/2	193.9	26.3		L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	1
2	Dodge Bros. Mer. Exp.	545	109	109	3850	1900	B 5.00/20	B 5.00/20	Own	4-3 1/2 x 4 1/2	175.4	21.0	45-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	2
3	Fargo Packet	595				1935	B 5.00/19	B 5.00/19	Own	6-3 1/2 x 3 1/2	174.9	21.6	58-3000	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	3
4	Gen. Motors T11-1001	625	109		3800	1980	B 5.50/19	B 5.50/19	Pontiac	6-3 1/2 x 3 1/2	200.2	26.3	60-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	4
5	Reo..... Jr. 15	785	115				B 6.00/18	B 6.00/18	Con 16E	6-3 1/2 x 3 1/2	214.7	27.3	60-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	5
6	Rugby..... 614				4000	2150	B 5.00/19	B 5.00/19	Con 22-A	6-3 1/2 x 4 1/2	199.0	25.3	57-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	6
7	Whippet..... 96A	360	103	103	3100	1691	B 4.75/19	B 4.75/19	Own	4-3 1/2 x 4 1/2	145.7	15.6	40-3200	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	7
8	Willis Six..... 98B	525	110	110	3400	1903	B 5.00/19	B 5.00/19	Own	6-3 1/2 x 3 1/2	193.0	25.3	65-3400	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	8
1500 Pounds																										
9	Dodge Brothers.....	695	124	124	4760	2260	B 5.50/20	B 5.50/20	Own	4-3 1/2 x 4 1/2	175.4	21.0	45-2800	L	G	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	9
10	Dodge Brothers.....	745	124	124	4760	2380	P 30x5	P 30x5	Own	4-3 1/2 x 4 1/2	175.4	21.0	45-2800	L	G	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	10
11	Dodge Brothers.....	795	124	124	4860	2260	B 5.50/20	B 5.50/20	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	11
12	Dodge Brothers.....	845	124	124	4860	2480	P 30x5	P 30x5	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	12
13	Fargo Clipper.....	725				2340	B 5.50/18	B 5.50/18	Own	6-3 1/2 x 4 1/2	195.6	23.4		L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	13
14	Fisher Standard Jr. B.	120			6000	2650	B 5.50/20	P 30x5	Con W10	4-3 1/2 x 4 1/2	200.5	24.0	48-2800	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	14
15	Fisher Standard Jr. B.	125			6000	2650	B 5.50/20	P 30x5	Con 17E	4-3 1/2 x 4 1/2	214.7	27.3	60-2800	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	15
16	Gen. Motors T15-1501	695	130	141	5400	2625	B 5.50/20	B 5.50/20	Pontiac	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	16
17	Int. Harv. Spec. Del.	124	124	124	5200	2200	B 5.25/20	B 5.25/20	Wau XA	4-3 1/2 x 4 1/2	173.0	19.6	30-2700	L	G	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	17
18	Int. Harvester, AW-1	136	136	136	5495	2620	B 5.25/20	B 5.25/20	Wau XA	4-3 1/2 x 4 1/2	173.0	19.6	30-2700	L	G	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	18
19	Kleiber.....	1170	121		4900	2400	B 5.50/20	B 5.50/20	Con	6-2 1/2 x 4 1/2	185.4	19.8	46-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	19
20	Relay..... 15A	1370	131			3750	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	52-2200	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	20
21	Rugby..... Fast Mail	725	110			1760	B 5.00/19	B 5.00/19	Con	6-2 1/2 x 4 1/2	185.4	19.8	45-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	21
22	Studebaker..... GN-P	845	115			2325	B 6.00/19	B 6.00/19	Own	6-3 1/2 x 4 1/2	221.4	27.3	71-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	22
1 Ton																										
23	Acme..... 17	1060	136		6400	3100	P 30x5	P 30x5	Con 29L	6-2 1/2 x 4 1/2	185.0	19.8	44-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	23
24	Atterbury..... A-6	1095	132	145	6915	3530	P 30x5	P 30x5	Lyc WRC	6-3 1/2 x 4 1/2	185.0	19.8	60-3000	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	24
25	Available..... T-10	Op			9000	4000	P 30x5	P 30x5	Con 18E	6-3 1/2 x 4 1/2	215.7	27.3	61-2900	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	25
26	Available..... T-11	Op			9000	4100	P 32x6	P 32x6	Con 18E	6-3 1/2 x 4 1/2	215.7	27.3	61-2900	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	26
27	Brookway..... 60		132	141	6000	3200	P 30x5	P 30x5	Con 26B	6-3 1/2 x 4 1/2	214.7	27.3	61-3000	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	27
28	Brookway..... 65		137	149	6500	3400	P 30x5	P 30x5	Con 27B	6-3 1/2 x 4 1/2	248.2	27.3	65-2700	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	28
29	Commerce..... S-11	1600	142			3900	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	52-2200	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	29
30	Diamond T..... 200	785	128	128	6500	3050	P 30x5	P 30x5	Bud H199	4-3 1/2 x 4 1/2	198.8	22.5	67-3000	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	30
31	Diamond T..... 215	885	135	135	6500	3150	P 30x5	P 30x5	Bud J214	4-3 1/2 x 4 1/2	214.7	27.3	61-3000	L	G	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	31
32	Dodge Brothers.....	795	133	133	5840	2590	B 6.00/20	P 32x6	Own	4-3 1/2 x 4 1/2	175.4	21.0	45-2800	L	G	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	32
33	Dodge Brothers.....	810	133	133	5840	2470	P 30x5	P 30x5	Own	4-3 1/2 x 4 1/2	175.4	21.0	45-2800	L	G	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	33
34	Dodge Brothers.....	895	133	133	5940	2690	B 6.00/20	P 32x6	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	34
35	Dodge Brothers.....	910	133	133	5940	2570	P 30x5	P 30x5	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	35
36	Dodge Brothers.....	1095	140	140	6205	2955	P 30x5	P 30x5	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	36
37	Dodge Brothers.....	1110	140	140	6205	2985	P 33x5	P 33x5	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	37
38	Dodge Brothers.....	1140	140	140	6205	3000	P 32x6	P 32x6	Own	6-3 1/2 x 3 1/2	208.0	27.3	63-3200	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	38
39	Fargo Freight.....	795	131	151	7500	2725	B 6.00/20	P 32x6	Own	4-3 1/2 x 4 1/2	174.9	21.6		L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	39
40	Federal D 1-1 1/2 Ton	830	131	151	7500	3420	B 6.00/20	P 32x6	Con W10	6-3 1/2 x 4 1/2	200.5	24.0	48-2500	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	40
41	Federal..... E6	1090	132	156	7000	3240	B 6.00/20	P 32x6	Con 17E	6-3 1/2 x 4 1/2	215.0	27.3	60-2600	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	41
42	Fisher Standard..... 10A	144	162		7500	3400	P 30x5	P 30x5	Con 17E	6-3 1/2 x 4 1/2	214.7	27.3	60-2800	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	42
43	Garford..... S-11	1600	142	162		3900	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	52-2200	L	C	2 1/2	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	43
44	Gen. Motors T17-1703	745	130	141	6000	2670	B 7.00/20	P 30x5	Pontiac	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	C	2 1/2	2 1/2	10 1/2	7	PG	No	Car	P	D-R	D-R	44
45	Gramm-Bernstein..... 10	129	146			3020	P 30x5	P 30x5	Lyc CT	4-3 1/2 x 4 1/2	220.9	22.5	38-2150	L	C											

Line Number	Radiator Make	Clutch	Gear Set		Universal Make and No.	Rear Axle			Front Axle			Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number					
			Type and Make	Make and Model		Location	No. of Forward Speeds	At Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type			Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear
1	Har	P.Own	Own Int.	U	3	Own	Own Int.	S ₁	3.82	12.7	Own Int.															
2	McC	P.Roc	Own	U	3	U-P	Own	S ₁	4.7	14.3	Own	L4IH	121	CX	Own	5x1 1/4 x 1/4	C		26 1/2	43 1/2	35 1/2 x 1 1/4	53 1/2 x 1 1/4	N			
3	Own	P.B&B	W-G	U	3	Own	Own	S ₁	4.7	14.3	Own	L4IH	121	CX	Own	5x1 1/4 x 1/4	C		26 1/2	43 1/2	35 1/2 x 1 1/4	53 1/2 x 1 1/4	N			
4	Lon	P.Own	Pontiac	U	3	M.M.	Pontiac	S ₁	4.42	14.7	Pontiac	S4IM	200	TX	Ros	5x1 1/4 x 1/4	C		26 1/2	43 1/2	35 1/2 x 1 1/4	53 1/2 x 1 1/4	N			
5	Har	P.B&B	W-G	U	3	Own	W-G	S ₁	4.45	14.6	Sal	S4IM	178	41	Ros	5 1/2 x 2 1/4 x 1/4	C	52 1/2	26	44	36x2	54x2	N			
6	McC	P.B&B	War	U	3	Own	Adams	S ₁	4.45	14.6	Sal	S4IM	178	41	Ros	5 1/2 x 2 1/4 x 1/4	C	52 1/2	26	44	36x2	54x2	N			
7	Fed	P.B&B	Own	U	3	M.M.2	Own	S ₁	4.55	14.7	Own	BO4YM	190	2X	Own	4 1/2 x 1 1/4 x 1/4	C				35 1/2 x 1 1/4	49 1/2 x 1 1/4	N			
8	Fed	P.B&B	Own	U	3	M.M.2	Own	S ₁	4.89	14.1	Own	B4IM	147	41	Own	4 1/2 x 1 1/4 x 1/4	C				36x1 3/4	49 1/2 x 1 1/4	N			
9	Fed	P.B&B	W-G	U	3	Spl	Own	S ₁	5.63	21.2	Own	L4IH	189	TX	Han	6x2 3/4 x 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N			
10	Fed	P.B&B	W-G	U	3	Spl	Own	S ₁	5.63	21.2	Own	L4IH	189	TX	Han	6x2 3/4 x 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N			
11	Fed	P.B&B	W-G	U	3	Spl	Own	S ₁	5.11	19.2	Own	L4IH	189	TX	Han	6x2 3/4 x 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N			
12	Mod	P.Own	W-G	U	3	Own	Own	S ₁	5.11	19.2	Own	L4IH	189	TX	Han	6x2 3/4 x 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N			
13	Lon	P.Own	W-G T-9	U	4	No	Blo 2	Sal F	5.37	34.4	Sal F	L4IH	362	TX	Ros	6 1/2 x 2 1/4 x 1/4	C	84	47 1/2	32	40x2	54x2 1/4	N			
14	Lon	P.B-L	B-L 214	U	4	No	Blo 2	Sal F	5.37	34.4	Sal F	L4IH	362	TX	Ros	6 1/2 x 2 1/4 x 1/4	C	84	47 1/2	32	40x2	54x2 1/4	N			
15	Lon	P.Own	Own	U	3	No	M.M.	Tim 51500	5.46	16.1	Tim 11709	B4IM	308	41	Jac	6x2 1/4 x 1/4	C	87	48	34	38x2	50 1/2 x 2 1/4	N			
16	Lon	Roc	MM-O	U	3	No	M.M.4	Eat 502	5.46	15.1	Eat 200F	BE4IM	256	21	Ros	4 1/2 x 1 1/4 x 1/4	C	86 1/2	50 1/2	32	40x2	53x2	N			
17	Lon	Roc	MM-O	U	3	No	M.M.4	Eat 517	5.46	15.1	Eat 217	B4IM	212	21	Ros	4 1/2 x 1 1/4 x 1/4	C	86 1/2	50 1/2	32	40x2	53x2	N			
18	Lon	B-L	B-L 20	U	4	No	Spl	Tim 52604	5.49	17.4	Tim 11703H	L4IH	440	TX	Han	6 1/2 x 2 1/4 x 1/4	C	94	60		38x2	52x2	N			
19	Fed	P.Own	Own	U	3	Spl	Own	S ₁	6.00	38.4	Col 5540															
20	Fed	P.Own	Own	U	3	Spl	Own	S ₁	4.45	14.8	Own															
21	Fed	P.Own	Own	U	3	Spl	Own	S ₁	4.45	14.8	Own															
22	Lon	P.Own	W-G	U	3	Spl	Own	S ₁	4.45	14.8	Own	B4IM	227		Ros	5 1/2 x 2 1/4 x 1/4	C				36x2	54x2	N			
23	Per	P.B&B	Ful	U	4	No	Blo 3	Tim 52200H	BF	5.83	35.9	Tim 11703	L4IH	380	TX	Ros	4 1/2 x 3 1/4 x 1/4	C	108	58	33	37x2	50x2 1/4	N		
24	Fed	D-B-L	B-L	U	4	No	Spl	Tim 52000H	SF	5.83	37.4	Shu 5429	L4IH	136	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	98 1/2	55	34	38x2 1/4	50x2 1/4	N		
25	You	D-B-L	B-L 214	U	4	No	Blo	Tim 52200H	SF	5.83	37.4	Shu 5429	L4IH	136	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	98 1/2	55	34	38x2 1/4	50x2 1/4	N		
26	You	D-B-L	B-L 214	U	4	No	Blo	Tim 52200H	SF	5.83	37.4	Shu 5429	L4IH	136	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	98 1/2	55	34	38x2 1/4	50x2 1/4	N		
27	G&O	P.B&B	War T 71	U	4	No	Spl 2	Col 36500	SF	5.59	25.3	Col 3812	B4IM	190	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	106	52 1/2	34	37x2 1/4	52x2 1/4	N		
28	Lon	P.B&B	B-L 20A	U	4	No	Spl 2	Col 36000	SF	5.12	21.3	Col 5530	C4IM	190	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	95	55	34	37x2 1/4	52x2 1/4	N		
29	Lon	P.B-L	B-L 20	U	4	No	Blo 2	Col 54028	SF	5.1	25.5	Col 5530														
30	G&O	P.B&B	W-G	U	4	No	Spl 2	Cla B370	SF	5.1	25.5	Cla F208	L4IH	244	TX	Ros	6x2 1/4 x 1/4	C	93	53	34	42x2	50x2 1/4	N		
31	G&O	P.B&B	W-G	U	4	No	Spl 2	Cla B370	SF	5.1	25.5	Cla F208	L4IH	244	TX	Ros	6x2 1/4 x 1/4	C	93	53	34	42x2	50x2 1/4	N		
32	Fed	P.B&B	Cla	U	4	No	Spl	Own	5.6	36.1	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
33	Fed	P.B&B	Cla	U	4	No	Spl	Own	5.6	36.1	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
34	Fed	P.B&B	Cla	U	4	No	Spl	Own	5.1	33.4	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
35	Fed	P.B&B	Cla	U	4	No	Spl	Own	5.1	33.4	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
36	Fed	P.B&B	W-G	U	4	No	Spl	Own	5.6	36.1	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
37	Fed	P.B&B	W-G	U	4	No	Spl	Own	5.6	36.1	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
38	Fed	P.B&B	W-G	U	4	No	Spl	Own	5.6	36.1	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
39	Own	P.Own	W-G T-9	U	4	No	Spl	Own	5.6	36.1	Own	L4IH	206	TX	Han	6x2 3/4 x 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N			
40	Lon	F.B&B	W-G T-9	U	4	No	Spl	Cla B370	BF	5.6	36.1	Cla F208	L4IH	377	TX	Gem	6x2 3/4 x 1/4	C	100	54 1/2	34	38x2 1/4	50x2 1/4	N		
41	Lon	P.B&B	W-G T-9	U	4	No	Spl 2	Cla B370	BF	5.6	36.1	Cla F208	L4IH	377	TX	Gem	6x2 3/4 x 1/4	C	100	54 1/2	34	38x2 1/4	50x2 1/4	N		
42	Lon	P.B-L	B-L 214	U	4	No	Blo 3	Tim 52200H	SF	5.83	37.4	Tim 11703H	L4IH	380	TX	Ros	4 1/2 x 3 1/4 x 1/4	C	108	58 1/2	33	37x2	50x2 1/4	N		
43	Lon	P.B-L	B-L 20	U	4	No	Blo	Col 54028	SF	5.1	25.5	Col 5530														
44	Lon	P.Own	Own	U	3	No	M.M.	Tim 51505	SF	5.4	35.9	Tim 11709	B4IM	308	41	Jac	6x2 1/4 x 1/4	C	87	48	34	38x2	50 1/2 x 2 1/4	N		
45	Own	D.Mun	Mun T23	U	4	No	Spl	Sal A	5.85	23.1	Sal D	L4IH	244	TX	Ros	6x2 1/4 x 1/4	C	97	57 1/2							
46	G&O	P.B&B	War T 71	U	4	No	Spl 2	Tim 32000H	BF	5.59	25.3	Tim 11703H	L4IH	136	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	98 1/2	55	34	38x2 1/4	50x2 1/4	N		
47	Lon	P.B&B	B-L 20A	U	4	No	Spl 2	Col 36500	SF	5.59	25.3	Col 3812	B4IM	190	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	106	52 1/2	34	37x2 1/4	52x2 1/4	N		
48	Lon	P.B&B	B-L 20A	U	4	No	Spl 2	Col 36000	SF	5.12	21.3	Col 5530	C4IM	190	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	95	55	34	37x2 1/4	52x2 1/4	N		
49	Lon	P.B&B	B-L 20A	U	4	No	Spl 2	Col 36000	SF	5.12	21.3	Col 5530	C4IM	190	TX	Ros	5 1/2 x 2 1/4 x 1/4	C	95	55	34	37x2 1/4	52x2 1/4	N		
50	Lon	Roc	M.M.	U	3	No	M.M.4	Eat 1124	SF	5.29	27.2	Eat 430F	BE4IM	292	21	Ros	6x2 1/4 x 1/4	C	86 1/2	50 1/2	32	40x2	46x2 1/4	N		
51	Per	D-B-L	B-L 214	U	4	No	Spl	Cla B370	SF	5.4	34.6	Cla F208	L4IH	377	TX	Ros	6x2 1/4 x 1/4	C	96	58	34					

Line Number	Make, Model and Capacity	General		Tire Size		Engine										Fuel System	Electrical System	Line Number								
		Chassis Price	Standard W.B. Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings		No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
1½ Ton—Cont'd																										
1	Dodge Bros.	1365	150 150	8140	3695	P 32x6	P 32x6	Own	6-3½x3½	208.0	27.3	63-3200	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	1	
2	Dodge Bros.	1380	150 150	8140	3740	P 32x6	DP 32x6	Own	6-3½x3½	208.0	27.3	63-3200	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	2	
3	Dodge Bros.	1405	165 165	8310	3855	P 34x5	P 36x6	Own	6-3½x3½	208.0	27.3	63-3200	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	3	
4	Dodge Bros.	1415	165 165	8310	3810	P 32x6	P 32x6	Own	6-3½x3½	208.0	27.3	63-3200	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	4	
5	Dodge Bros.	1430	165 165	8310	3855	P 32x6	DP 32x6	Own	6-3½x3½	208.0	27.3	63-3200	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	5	
6	Douglas	BGC4	1900 109	9000	3900	P 30x5	DP 30x5	Bud WTU	4-3½x5½	226.4	22.5	36-1800	L	C	2½	8	10	7	PC	Bu	Zen	V	N-E	N-E	6	
7	Douglas	B4	2075 109	9000	3950	P 30x5	P 32x6	Bud HS6	4-3½x5½	226.4	22.5	36-1800	L	C	2½	8	10	7	PC	Bu	Zen	V	N-E	N-E	7	
8	Douglas	B6	2175 150	Op	10500	4100	P 30x5	P 32x6	Bud HS6	4-3½x5½	226.4	22.5	36-1800	L	C	2½	8	10	7	PC	Bu	Zen	V	N-E	N-E	8
9	Duplex	GF	2500 142	8300	4700	P 32x6	P 34x7	Bud WTU	4-3½x5½	226.4	22.5	37-1800	L	C	2½	8	10	7	PC	Bu	Zen	V	N-E	N-E	9	
10	Duplex	GS	2950 142	8500	4800	P 32x6	P 34x7	Bud HS6	6-3½x4½	241.6	27.3	57-2500	L	C	2½	8	10	7	PC	Bu	Zen	V	N-E	N-E	10	
11	Federal	F7	1525 132	1525	5800	3765	P 30x5	DP 30x5	Con 16C	6-3½x4	248.0	27.3	64-2500	L	C	2½	8	10	7	PC	KP	Zen	V	N-E	N-E	11
12	Fisher-Standard	15A	144 162	8000	3450	P 30x5	P 32x6	Con 17E	6-3½x4	214.7	27.3	60-2800	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	12	
13	Fisher-Standard	16A	156 186	10000	3800	P 32x6	P 32x6	Con 16C	6-3½x4	248.2	27.3	65-2700	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	13	
14	Fisher-Standard	17A	156 186	10000	3900	P 32x6	P 32x6	Con 16C	6-3½x4	248.2	27.3	65-2700	L	C	2½	8	10	7	PC	Ha	Zen	V	N-E	N-E	14	
15	F.W.D.	H 4	3325 120	160	9300	5300	P 34x7	P 34x7	Wis SU	4-4½x5	251.0	25.6	50-2000	L	H	C	2½	8	3	PC	Zen	V	N-E	N-E	15	
16	Ford	AA	520 131	157	7800	2636	B 00/20	P 32x6	Own	4-3½x4½	200.5	24.0	40-2200	L	G	A	1½	7	3	PC	No	Zen	V	N-E	N-E	16
17	Garford	A0	2900 168	144	4700	P 34x5	DP 34x5	Bud DS6	6-3½x5	309.6	31.5	56-2000	L	C	2½	8	10	7	PC	No	Zen	V	N-E	N-E	17	
18	Garford	S 11	1900 162	144	4300	P 30x5	DP 30x5	Bud HS 6	6-3½x4½	241.6	27.3	52-2200	L	C	2½	8	10	7	PC	No	Zen	V	N-E	N-E	18	
19	Gen. Motors T19-2212	960	130 152	7300	2895	B 5.50/20	DB 5.50/20	Pontiac	6-3½x3½	200.3	26.3	58-3000	L	C	B	2½	5½	3	PC	No	Mar	V	N-E	N-E	19	
20	Gen. Motors T25-2508	1265	130 152	7900	3385	B 6.00/20	DB 6.00/20	Buick	6-3½x4½	257.5	28.3	76-2500	L	G	C	2½	8½	4	PC	Ha	Mar	M	N-E	N-E	20	
21	Gottfredson	RB-36	140 174	8400	3700	P 32x6	P 32x6	Own	6-3½x4½	214.7	27.3	61-3000	L	G	C	2½	8	4	PC	No	Joh	M	N-E	N-E	21	
22	Gramm	B 1495	140 174	8400	3800	P 30x5	DP 30x5	Lye	6-3½x4½	224.0	25.3	56-2700	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	22	
23	Gramm-Bernstein	115	146 160	7900	3650	P 30x5	P 30x5	Lye C4W	4-4½x5	251.0	25.6	64-2000	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	23	
24	Hahn	17 H	142 162	7900	3750	P 32x6	P 32x6	Con 18E	6-3½x4	214.7	27.3	66-3000	L	G	A	2½	8	4	PC	No	Zen	V	N-E	N-E	24	
25	Hahn	317H	142 162	7900	3900	P 32x6	P 32x6	Con 16C	6-3½x4½	248.2	27.3	65-2700	L	G	C	2½	8	4	PC	No	Str	V	N-E	N-E	25	
26	Indiana	111	129 165	9000	3600	P 30x5	P 32x6	Her OX	4-4½x5	241.0	25.6	65-2700	L	G	C	2½	8	4	PC	No	Str	V	N-E	N-E	26	
27	Indiana	80	149 168	9000	3650	P 32x6	P 32x6	Con 27B	6-3½x4½	248.2	27.3	65-2700	L	G	C	2½	8	4	PC	No	Str	V	N-E	N-E	27	
28	Indiana	300	149 168	9000	3650	P 30x5	P 32x6	Wis F	6-3½x4½	211.5	25.3	67-2200	H	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	28	
29	Int. Harv'tr.	SI-34	160 160	8500	3595	P 30x5	P 30x5	Lye CT	4-3½x5	221.0	22.5	43-2350	L	G	C	2½	9	4	PC	No	Zen	V	N-E	N-E	29	
30	Int. Harv'tr.	SF-34	160 160	8500	3520	P 30x5	P 32x6	Lye CT	4-3½x5	221.0	22.5	43-2350	L	G	C	2½	9	4	PC	No	Zen	V	N-E	N-E	30	
31	Int. Harv'tr.	SI-36	160 160	8650	3645	P 30x5	P 30x5	Lye 45L	6-3½x4½	224.0	25.3	61-2800	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	31	
32	Int. Harv'tr.	SF-36	160 160	8570	3570	P 30x5	P 32x6	Lye 45L	6-3½x4½	224.0	25.3	61-2800	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	32	
33	Int. Harvester	AL-3	138 164	9300	4300	B 5.50/20	DB 6.00/20	Lye 45LH	6-3½x4½	224.0	25.3	61-2800	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	33	
34	Kenworth	100	1995 164	182	10000	4200	P 30x5	DP 30x5	Bud HS-6	6-3½x4½	241.6	27.3	57-2500	L	C	2½	8	4	PC	Bu	Zen	V	N-E	N-E	34	
35	Kiesel	1925	152 172	9200	4100	S 36x4	S 36x6	Own 4000	4-3½x5	259.4	24.1	52-1200	L	C	2½	8	4	PC	No	Str	V	N-E	N-E	35		
36	Kielber	158	158 158	4500	4200	P 32x6	P 32x6	Con 16C	6-3½x4½	248.2	27.3	65-2700	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	36		
37	LaFrance-Republic-C	1	144 165	7900	3300	B 6.00/20	P 32x6	Lye 45L	6-3½x4½	224.0	25.3	61-2750	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	37		
38	LaF. Republic	76-6	150 150	9000	3500	P 30x5	P 32x6	Lye 45L	6-3½x4½	224.0	25.3	61-2750	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	38		
39	Lange	R 2225	140 172	9300	4600	P 32x6	P 32x6	Her WXB	6-3½x4½	208.0	33.7	67-2400	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	39	
40	Luedinghaus	W6	140 170	9950	5200	P 32x6	DP 32x6	Wau	6-3½x4½	208.0	33.7	65-2500	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	40	
41	Maccar	36200	154 182	10100	4500	P 32x6	DP 32x6	Bud HS	6-3½x4½	248.2	27.3	65-2700	L	G	C	2½	8	4	PC	No	Zen	V	N-E	N-E	41	
42	Mack	BB 3500	165 164	8500	6450	P 32x6	DP 32x6	Own AB	4-4½x5	283.5	28.9	50-2200	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	42		
43	Mack	AB 3100	146 164	8500	5500	S 36x4	DS 36x4	Own AB	4-4½x5	283.5	28.9	50-2200	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	43		
44	Mack	AB 3500	164 164	8500	6050	S 36x4	DS 36x4	Own AB	4-4½x5	283.5	28.9	50-2200	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	44		
45	Relay	40	2990 168	168	5300	P 34x5	DP 34x5	Bud DS 6	6-3½x5	309.6	31.5	56-2000	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	45		
46	Relay	S 11	1900 162	144	4300	P 30x5	DP 30x5	Bud HS 6	6-3½x4½	241.6	27.3	52-2200	L	C	2½	8	4	PC	No	Zen	V	N-E	N-E	46		
47	Reo	FA-137	1295 137	7800	3525	B 6.50/20	P 32x6	Own	6-3½x5	268.3	27.3	67-2800	L	C	A	2½	12½	7	PC	No	Sch	V	N-E	N-E	47	
48	Reo	FE 1395	152 172	7800	3700	B 6.50/20	P 32x6	Own	6-3½x5	268.3	27.3	67-2800	L	C	A	2½	12½	7	PC	No						

Line Number	Radiator Make	Clutch	Type and Make	Gearset			Universal Make and No.	Rear Axle			Front Axle			Brakes			Frame			Body Mounting Data			Springs			Auxiliary Type	Line Number	
				Make and Model	Location	No. of Forward Speeds		Aux. Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios	Reduce. in High	Reduce. in Low	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front			Rear
1	Fed	P.B.&B	Own	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
2	Fed	P.B.&B	Own	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
3	Fed	P.B.&B	Own	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
4	Fed	P.B.&B	Own	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
5	Fed	P.B.&B	Own	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
6	Own	D.Ful	Eul SU12	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
7	Own	D.Ful	FulSU12	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
8	Own	D.Ful	FulSU12	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
9	Mod	D.B-L	B-L	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
10	Mod	D.B-L	B-L	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
11	Lon	P.B.&B	Own	4	No	U-P	Own	W	5.67	36.8	Own	L4IH	299	TX	Ros	7x2 1/2 x 3/4	C	106 1/2	69 1/2	34	39x2	56x3						
12	Lon	P.B-L	B-L 214	4	No	Blo 3	Tim 62200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	106	68	32	40x2	54x3						
13	Lon	P.B-L	B-L 214	4	No	Blo 3	Tim 62200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	106	68	32	40x2	54x3						
14	Lon	P.B-L	B-L 214	4	No	Blo 3	Tim 62200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	106	68	32	40x2	54x3						
15	Per	D.Det	Cot A	4	No	Own	Own	BF	7.86	38.0	Own	O4M	252	21	Ros	5 1/2 x 2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
16	Own	P.B-L	B-L 35	4	No	Own	Own	BF	6.54	34.8	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
17	Lon	D.B-L	B-L 35	4	No	Own	Own	BF	6.54	34.8	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
18	Lon	P.B-L	B-L 35	4	No	Own	Own	BF	6.54	34.8	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
19	Lon	P.B-L	B-L 35	4	No	Own	Own	BF	6.54	34.8	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
20	Lon	D.	Mun	4	No	Spl	Tim 5261	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
21	Lon	D.B-L	B-L 20-4	4	No	Spl	Tim 5261	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
22	Per	D.Own	Cov A-4J	4	No	Blo	Tim 52200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
23	Own	D.Ful	FulSU 12	4	No	Blo	Tim 52200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
24	Chi	D.B-L	B-L 35	4	No	Blo	Tim 52200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
25	Chi	D.B-L	B-L 35	4	No	Blo	Tim 52200H	BF	5.83	37.2	Tim 1703H	L4IH	380	TX	Ros	6x2 1/2 x 3/4	C	112	81	36	42 1/2 x 2 1/2	52 1/2 x 2 1/2						
26	McC	P.B.&B	B-L 31	3	No	Spl	Cla B 504	BF	5.5	26.4	Tim 5405	K2IM	432	21	Ros	5 1/2 x 3 1/2 x 3/4	C	99	54	34	40x2	54x3						
27	Lon	P.B.&B	B-L 20-4	4	No	Spl	Cla B 504	BF	5.5	26.4	Tim 5405	K2IM	432	21	Ros	5 1/2 x 3 1/2 x 3/4	C	99	54	34	40x2	54x3						
28	Lon	P.B.&B	B-L 20-4	4	No	Spl	Cla B 504	BF	5.5	26.4	Tim 5405	K2IM	432	21	Ros	5 1/2 x 3 1/2 x 3/4	C	99	54	34	40x2	54x3						
29	Lon	P.B.&B	B-L 20-4	4	No	Spl	Cla B 504	BF	5.5	26.4	Tim 5405	K2IM	432	21	Ros	5 1/2 x 3 1/2 x 3/4	C	99	54	34	40x2	54x3						
30	Lon	P.Own	Own	4	No	M.M.5	Eat 1502	SF	5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 3/4	T	104	61	34	32x2 1/2	52x3						
31	Lon	P.Own	Own	4	No	M.M.5	Eat 1502	SF	5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 3/4	T	104	61	34	32x2 1/2	52x3						
32	Lon	P.Own	Own	4	No	M.M.5	Eat 1502	SF	5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 3/4	T	104	61	34	32x2 1/2	52x3						
33	Lon	P.Own	Own	4	No	M.M.5	Eat 1502	SF	5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 3/4	T	104	61	34	32x2 1/2	52x3						
34	Per	D.B-L	B-L 35	4	No	Spl	Tim 5400H	BF	5.83	31.2	Cla F 304	L4IH	453	TD	Ros	5 1/2 x 3 1/2 x 3/4	P	126	82	34	39x2	52x3						
35	McC	D.W-G	W-G T38L	4	No	Spl	Tim 6462	WF	6.40	28.5	Tim 1526	T2IM	21	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2							
36	Own	D.B-L	B-L 35	4	No	Spl	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
37	G&O	D.B-L	B-L 20	4	No	Spl	Tim 52200H	BF	5.83	31.2	Tim 1701H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
38	Lon	D.B-L	B-L 31	3	No	Spl	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
39	Mod	D.B-L	B-L 31	3	No	Spl	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
40	Per	D.B-L	B-L 31	3	No	Spl	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
41	Per	D.B-L	B-L 214	4	No	Cle 3	Tim 5400H	BF	5.83	31.2	Tim 1703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
42	Own	D.Own	Own AB	4	No	Spl	Own DB	SF	5.83	31.2	Own BB	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
43	Own	D.Own	Own AB	4	No	Spl	Own AB	SF	5.83	31.2	Own BB	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
44	Own	D.Own	Own AB	4	No	Spl	Own AB	SF	5.83	31.2	Own BB	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
45	Lon	D.B-L	B-L 35	4	No	Blo	Own 30	RF	6.45	34.5	Tim 1704H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
46	Lon	P.B-L	B-L 20	4	No	Blo	Own 20	RF	6.45	34.5	Tim 1704H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
47	Lon	P.B-L	B-L 20	4	No	Blo	Own 20	RF	6.45	34.5	Tim 1704H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
48	Own	D.B-L	B-L 20	4	No	Pet	Own	SF	5.83	31.2	Tim 1703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
49	Own	D.B-L	B-L 20	4	No	Pet	Own	SF	5.83	31.2	Tim 1703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
50	Fed	D.B-L	B-L 20	4	No	Spl	Eat	SF	5.83	31.2	Tim 1703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
51	You	D.B-L	B-L 35	4	No	Spl	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
52	Own	D.B-L	B-L 20	4	No	Blo	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
53	Own	D.B-L	B-L 20	4	No	Blo	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
54	Lon	D.B-L	B-L 35	4	No	Blo	Tim 63702	WF	6.5	34.8	Tim 1704H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
55	Lon	P.B-L	B-L 20	4	No	Blo	Tim 5400H	BF	5.83	31.2	Tim 5530	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
56	Per	P.B.&B	B-L 20	4	No	Spl	Tim 5400H	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
57	Fed	P.B.&B	War	4	No	Spl	Cla	BF	5.83	31.2	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						
58	Own	P.Own	Own 20A	4	No	Spl	Own 20A	RF	6.45	34.5	Tim 1704H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 3/4	C	126	76	34	38x2	50x2 1/2						

Line Number	Make, Model and Capacity	General		Tire Size		Engine														Fuel System		Electrical System		Line Number			
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed		Ignition System Make	Generator, Starter Make	
2 Ton—Cont'd																											
1	General Motors 4406	1855	141	181	10600	4675	B 7 00/20	B 9 00/20	Bulck	6-3 1/2 x 4 1/2	257.5	28.3	76-2500	H	G	C	2 1/2	8 1/2	4	PC	Ha	Mar	M	D-R	D-R	1	
2	Gottfredson RB-46		Op			4740	P 32x6	DP32x6	Own	6-3 1/2 x 4 1/2	298	33.7	66-	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	2	
3	Gramm C 1895		160	196	10570	4820	P 32x6	DP32x6	Lyc ASA	6-3 1/2 x 4 1/2	278	63.1	82-2600	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	3	
4	Gramm-Bernstein 1158		149	196		3750	P 30x5	P 30x5	Con 15C	6-3 1/2 x 4 1/2	248	32.7	66-2900	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	4	
5	Gramm-Bernstein 115		146	160		4650	P 32x6	P 30x5	Lyc C4W	4-4 1/2 x 5	251.3	25.6	34-2000	L	G	C	2 1/2	10 1/2	4	PC	No	Str	M	D-R	D-R	5	
6	Hahn 37H		151		10000	4800	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	22.7	65-2760	L	G	C	2 1/2	10 1/2	4	PC	No	Str	M	D-R	D-R	6	
7	Hahn 37HL		162	181	10000	4900	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	22.7	65-2760	L	G	C	2 1/2	10 1/2	4	PC	No	Str	M	D-R	D-R	7	
8	Hug 22		160	195	10080	4550	P 30x5	DP30x5	Bud HS6	6-3 1/2 x 4 1/2	241	6.27	57-2200	L	G	C	2 1/2	8 1/2	4	PC	Bu	Str	V	A-L	A-L	8	
9	Hug 60		118		12260	5700	P 32x6	DP32x6	Bud WTU	4-4 1/2 x 5	226	4.22	37-1850	L	G	C	2 1/2	7 1/2	4	PC	Bu	Str	V	A-L	A-L	9	
10	Indiana 120		156	170	12000	5200	P 32x6	DP32x6	Con 30B	6-4 1/2 x 1 1/2	311	38.4	73-2400	H	C	C	2 1/2	13 1/2	7	PC	No	Str	M	A-L	A-L	10	
11	Indiana 140		160	188	14000	5500	P 32x6	DP32x6	Con 30B	6-4 1/2 x 1 1/2	311	38.4	73-2400	H	C	C	2 1/2	13 1/2	7	PC	No	Str	M	A-L	A-L	11	
12	Indiana 400		157	193	12500	5035	P 32x6	DP32x6	Wia Y	6-3 1/2 x 5	268	32.7	65-2500	H	C	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	12	
13	Indiana 111XW		120	120	10000	3730	P 32x6	DP32x6	Her OX	4-4 1/2 x 5	251.5	25.6	26-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	13	
14	Int. Harv'tr. 8D-44		117	117	10295	3700	P 30x5	P 32x6	Lyc CT	4-3 1/2 x 5	221	5.22	43-2350	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-B0	Non	14	
15	Int. Harv'tr. 8D-46		117	117	10355	3750	P 30x5	P 32x6	Lyc 48L	6-3 1/2 x 4 1/2	224	25.3	61-2800	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-B0	Non	15	
16	Int. Harvester A-4		145	185	13500	5070	P 32x6	DP32x6	Own FBB	6-3 1/2 x 4 1/2	279	31.5	65-2500	H	C	C	2 1/2	13 1/2	7	PC	Ha	Str	V	D-R	D-R	16	
17	Int. Harv'tr. SF-46		140	164	10841	3955	P 32x6	P 34x7	Lyc 48L	6-3 1/2 x 4 1/2	224	25.3	61-2800	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	17	
18	Kenworth 125	2550	157	183	12500	5200	P 32x6	DP32x6	Her WXB	6-3 1/2 x 4 1/2	298	33.7	67-2400	L	G	C	2 1/2	13 1/2	7	PC	HA	Str	V	A-L	A-L	18	
19	Kleiber 2450		170	156	9500	5800	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	22.7	66-3200	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	19	
20	LaFra-Republic D-1		144	165	9000	3750	P 30x5	DP30x5	Lyc 48L	6-3 1/2 x 4 1/2	224	25.3	61-2750	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	20	
21	LaFra-Republic F-1		144	165	9000	3750	P 30x5	DP30x5	Lyc 48L	6-3 1/2 x 4 1/2	224	25.3	61-2750	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	21	
22	LaFra-Republic .50		154			4100	P 30x5	DP30x5	Lyc 48L	6-3 1/2 x 4 1/2	224	25.3	61-2750	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	22	
23	Lange 13450		144	210	14000	5800	P 32x6	DP32x6	Her WXC	6-4 1/2 x 1 1/2	339	38.4	74-2400	L	G	C	2 1/2	13 1/2	7	PC	Pe	Str	M	A-L	A-L	23	
24	Maccar 400		126	182	12400	4850	P 32x6	DP32x6	Bud	6-3 1/2 x 4 1/2	241	6.27	57-2100	L	G	C	2 1/2	9 1/2	4	PC	Bu	Str	V	A-L	A-L	24	
25	Mack AB 3100		146	164		5500	S 36x4	DS36x4	Own AB	4-4 1/2 x 5	251.5	25.6	26-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	G-R-Bo	D-R	25	
26	Mack AB 3500		164			6050	S 36x4	DS36x4	Own AB	4-4 1/2 x 5	251.5	25.6	26-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	G-R-Bo	D-R	26	
27	Moreland RR-7	2025	158		9300	4000	P 32x6	P 32x6	Con 16C	6-3 1/2 x 4 1/2	248	32.7	70-1300	L	G	C	2 1/2	10 1/2	4	PC	No	Str	M	A-L	A-L	27	
28	Noble 146	2885	175	194	11850	4850	P 32x6	DP32x6	Bud HS6	6-3 1/2 x 4 1/2	241	6.27	57-2500	L	G	C	2 1/2	8 1/2	4	PC	Bu	Str	V	A-L	A-L	28	
29	Omort 200		124	148	11500	4800	P 32x6	DP32x6	Her OX	4-4 1/2 x 5	251.5	25.6	46-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	29	
30	Pierce-Arrow XA 3500		150	162		6280	S 36x4	DS36x4	Own XA	4-4 1/2 x 5	251.5	25.6	46-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	30	
31	Pierce-Arrow F-1 2450		140	180		3855	S 32x6	DP32x6	Own F-1	6-3 1/2 x 4 1/2	270	31.7	65-2500	H	C	C	2 1/2	13 1/2	7	PC	No	Str	M	A-L	A-L	31	
32	Relay 40 3240		168	185		5500	P 36x6	DP36x6	Bud DS6	6-3 1/2 x 4 1/2	309	6.31	56-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	32	
33	Relay S11 2030		162			4700	P 32x6	DP32x6	Bud HS6	6-3 1/2 x 4 1/2	241	6.27	52-2200	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	33	
34	Relay 50 3860		161			6800	P 36x6	DP36x6	Bud DW6	6-3 1/2 x 4 1/2	331	0.33	73-2200	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	A-L	A-L	34	
35	Reo FC 1645		152		9400	4025	P 32x6	DP32x6	Own	6-3 1/2 x 4 1/2	268	32.7	67-2800	L	C	A	2 1/2	12 1/2	7	PC	No	Str	M	D-R	D-R	35	
36	Reo FD 1745		168		9400	4075	P 32x6	DP32x6	Own	6-3 1/2 x 4 1/2	268	32.7	67-2800	L	C	A	2 1/2	12 1/2	7	PC	No	Str	M	D-R	D-R	36	
37	Reo FH 1545		142		9400	4165	P 32x6	DP32x6	Own	6-3 1/2 x 4 1/2	268	32.7	67-2800	L	C	A	2 1/2	12 1/2	7	PC	No	Str	M	D-R	D-R	37	
38	Sanford N 160					P 30x5	DP30x5	Con 16C	6-3 1/2 x 4 1/2	248	32.7	66-2900	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	38		
39	Schacht De Luxe 20		160	174	9500	4500	B 7 50/20	DB 7 50/20	Con 16C	6-3 1/2 x 4 1/2	248	32.7	65-2600	L	G	C	2 1/2	10 1/2	4	PC	No	Str	M	D-R	D-R	39	
40	Selden Unit 37		151	181	10000	4700	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	241	6.27	65-2760	L	G	C	2 1/2	10 1/2	4	PC	No	Str	M	D-R	D-R	40	
41	Service 40 3240		168	185		4900	P 36x6	DP36x6	Bud DS6	6-3 1/2 x 4 1/2	309	6.31	56-2000	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	41	
42	Service S11 2030		162			4295	P 32x6	DP32x6	Bud HS6	6-3 1/2 x 4 1/2	241	6.27	52-2200	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	42	
43	Sterling DB11-64XL		150	164	11000	4295	P 34x7	P 34x7	Bud 6XL	6-3 1/2 x 4 1/2	260	29.4	58-2400	L	G	A	2 1/2	12 1/2	7	PC	Wa	Str	V	A-L	A-L	43	
44	Stewart 29X 1695		145	176	10235	4400	P 32x6	DP32x6	Lyc ASA	6-3 1/2 x 4 1/2	278	35.5	61-2600	L	G	C	2 1/2	9 1/2	4	PC	No	Str	M	D-R	D-R	44	
45	White 56 3125		165	175	13000	5276	S 36x4	S 36x4	Own GRC	4-4 1/2 x 5	289	25.6	46-1700	L	G	S	2 1/2	11 1/2	3	PC	Own	Str	V	A-L	A-L	45	
46	Wichita 36 3250		165	Op	12500	5600	P 32x6	P 32x6	Wau 6XK	6-3 1/2 x 4 1/2	298	33.7	64-2300	L	G	C	2										

Line Number	Radiator Make	Clutch	Gear Set	Type and Make	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Universals Make and No.	Rear Axle			Front Axle			Brakes		Steering Gear Make	Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number	
									Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios Reduc. in High Reduc. in Low	Make and Model	Service	Area Service Brakes	Hand		Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front			Rear
1	Lon	D.Own	Mun	U	Eat T44DR	2F	R 8.05	40.9	Eat 433-F	B4IM	524	TX	Jac	6 1/2 x 3 1/2	P	107	59	34 1/2	38x2 1/2	50x3	1	1				
2	McC	D.B-L	B-L 35-4	U	Tim 54000H	BF	R 8.05	40.9	Tim 12703H	L4IHV	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	2	2				
3	Per	D.Own	Cov W4C	U	Tim 54000H	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	3	3				
4	Own	D.Ful	Ful S U12	U	Cla B504	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	4	4				
5	Own	D.Ful	Ful S U12	U	Cla B504	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	5	5				
6	Chi	D.B-L	B-L 35	U	Tim 54200H	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	6	6				
7	Chi	D.B-L	B-L 35	U	Tim 54200H	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	7	7				
8	You	D.Ful	Ful K U10	U	Cla 510	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	8	8				
9	You	D.B-L	B-L 51	U	Wls 6600	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	9	9				
10	G&O	D.B-L	B-L 35	U	Tim 54100H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	10	10				
11	G&O	D.B-L	B-L 35	U	Wls 4916L	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	11	11				
12	Lon	D.B-L	B-L 35	U	Cla B506	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	12	12				
13	McC	P.B&B	B-L 35	U	Wls 4611	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	13	13				
14	Lon	P.Own	Own	U	Eat 2002	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	14	14				
15	Lon	P.Own	Own	U	Eat 2002	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	15	15				
16	Mod	P.Own	Own A-5	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	16	16				
17	Lon	P.Own	Own	U	Eat 2002	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	17	17				
18	Per	D.B-L	B-L 35-4	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	18	18				
19	Own	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	19	19				
20	G&O	D.Ful	Ful	U	Tim 54200H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	20	20				
21	Own	D.Ful	Ful	U	Eat 2002	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	21	21				
22	Own	D.Ful	Ful	U	Eat 1712	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	22	22				
23	Mod	D.B-L	B-L 35	U	Wls 6617	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	23	23				
24	Per	D.B-L	B-L 35	U	Tim 56000H	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	24	24				
25	Own	D.Own	Own AB	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	25	25				
26	Own	D.Own	Own AB	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	26	26				
27	Lon	P.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	27	27				
28	Chi	D.Ful	Ful	U	Tim 54200H	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	28	28				
29	You	D.Ful	Ful MGU14	U	Wls 4610	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	29	29				
30	Own	D.Own	Own XA	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	30	30				
31	Fed	P.B&B	B-L	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	31	31				
32	Lon	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	32	32				
33	Lon	P.B-L	B-L 20	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	33	33				
34	Lon	D.B-L	B-L 51-5	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	34	34				
35	Own	D.B-L	Own	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	35	35				
36	Own	D.B-L	Own	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	36	36				
37	Own	D.B-L	Own	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	37	37				
38	Fed	D.B-L	B-L 20	U	Eat 2002	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	38	38				
39	You	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	39	39				
40	Own	D.B-L	B-L 35	U	Tim 54200H	BF	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	40	40				
41	Lon	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	41	41				
42	Lon	P.B-L	B-L 20	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	42	42				
43	Per	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	43	43				
44	Own	D.Ful	Ful	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	44	44				
45	Own	P.Own	Own GRBB	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	45	45				
46	Mod	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	46	46				
47	Per	D.B-L	B-L 35-4	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	47	47				
48	Per	D.B-L	B-L 35-4	U	Tim 54000H	Spl	R 6.38	25.5	Shu 5405	L4IH	353	TX	Ros	7 1/2 x 3 1/2	C	120	77 1/2	34 1/2	40x2 1/2	54x3	48	48				
49	Per	D.B-L	B-L 35	U	Tim 54000H	Spl	R 6.38																			

Line Number	Make, Model and Capacity	General			Tire Size		Engine										Fuel System	Electrical System	Line Number								
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings		No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
2 1/2 Ton—Cont'd.																											
1	Macear.	46	165	180	11700	5600	P 32x6	DP32x6	Wis Y	6-3 1/2 x 5	268.3	28.9	63-2600	C	C	2 1/2	3	PC	Ha	Str	V	D-R	D-R	1			
2	Mack	AB 3500	146	164	11700	5500	S 36x4	DS36x4	Own AB	4-4 1/2 x 5	28.9	28.9	63-2600	L	L	2 1/2	3	PS	On	Str	V	R-Bo	D-R	2			
3	Mack	AB 3500	164	182	13000	5500	S 36x4	DS36x4	Own AB	4-4 1/2 x 5	28.9	28.9	63-2600	L	L	2 1/2	3	PS	On	Str	V	R-Bo	D-R	3			
4	Omort	250	124	148	13000	5200	P 32x6	DP32x6	Her OX	4-4 x 5	251.3	25.6	46-2000	L	G	2	9 1/2	3	PC	No	Str	V	A-L	A-L	4		
5	Relay	40	3275	168	185	5700	P 36x6	DP36x6	Bud D56	6-3 1/2 x 5	309.6	31.5	56-2000	L	G	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	5		
6	Relay	50	4000	161	185	7000	P 36x6	DP36x6	Bud DW6	6-3 1/2 x 5	331.0	33.7	73-2200	L	G	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	6		
7	Relay	60DA	4555	175	192	7350	P 36x6	DP36x6	Bud BA6	6-4 1/2 x 5 1/2	410.9	40.8	66-2000	L	L	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	7		
8	Sanford	NO	170	170	11500	4800	B 7.50/20	DB 7.50/20	Con 16C	6-3 1/2 x 4 1/2	248.3	27.3	66-2000	L	L	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	8		
9	Schacht De Luxe	20A	136	174	11500	4800	B 7.50/20	DB 7.50/20	Con 16C	6-3 1/2 x 4 1/2	248.3	27.3	66-2000	L	L	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	9		
10	Selden	39C	164	190	13000	5800	P 32x6	DP32x6	Con 16R	6-4 x 4 1/2	311.0	38.4	72-2400	L	G	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	10		
11	Service	40	3240	168	185	5100	P 36x6	DP36x6	Bud D56	6-3 1/2 x 5	309.6	31.5	56-2000	L	G	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	11		
12	Service	60	4580	175	192	7000	P 36x6	DP36x6	Bud BUS	6-3 1/2 x 5	386.4	38.4	73-2000	L	G	2 1/2	10 1/2	3	PC	No	Str	V	A-L	A-L	12		
13	Stewart	18X	2690	165	220	5806	P 32x6	DP32x6	Lye TF	6-3 1/2 x 5	310.0	31.5	85-2750	L	G	2 1/2	10 1/2	4	PC	Pe	Str	V	A-L	A-L	13		
14	Stewart	32X	1990	165	220	5100	P 32x6	DP32x6	Lye ASA	6-3 1/2 x 5	278.0	31.5	85-2750	L	G	2 1/2	10 1/2	4	PC	Pe	Str	V	A-L	A-L	14		
15	Studebaker	77	2895	158	12135	4750	B7 00/20	DB 7.00/20	Own	8-3 1/2 x 4 1/2	337.0	39.2	115-3200	L	G	2 1/2	9 1/2	5	PC	No	Str	V	A-L	A-L	15		
16	Studebaker	88	3295	184	12500	4920	B7 30/20	DB 7.30/20	Own	8-3 1/2 x 4 1/2	337.0	39.2	115-3200	L	G	2 1/2	9 1/2	5	PC	No	Str	V	A-L	A-L	16		
17	White	51A	3750	170	1900	6438	S 36x5	S 36x8	Own GRB	6-4 1/2 x 5 1/2	396.0	38.4	75-2000	H	C	2 1/2	11 1/2	7	PC	On	Str	V	A-L	A-L	17		
18	White	63	5000	168	188	8350	P 34x7	DP34x7	Own 3A	6-4 x 4 1/2	358	38.4	77-2200	L	G	2 1/2	12 1/2	7	PC	On	Str	V	A-L	A-L	18		
19	Witt-Will	R2B	2900	158	14000	5800	P 32x6	DP32x6	Wau 6ML	6-4 x 4 1/2	311	38.4	72-2400	H	G	2 1/2	11 1/2	7	PC	No	Str	V	A-L	A-L	19		
20	Witt-Will	R2	3000	158	12500	5800	P 32x6	DP32x6	Con 16R	6-4 x 4 1/2	311	38.4	72-2400	H	G	2 1/2	11 1/2	7	PC	No	Str	V	A-L	A-L	20		
3 Ton																											
22	Acme	66	4230	186	Op	15850	P 36x8	DP36x8	Con 20R	6-4 1/2 x 4 1/2	380.9	40.8	89-2400	H	C	2 1/2	13 1/2	7	FP	Co	Str	V	A-L	A-L	22		
23	Acme	120	4740	220	Op	16000	P 36x8	DP36x8	Con 20R	6-4 1/2 x 4 1/2	380.9	40.8	89-2400	H	C	2 1/2	13 1/2	7	FP	Co	Str	V	A-L	A-L	23		
24	Amer. La France W2R	3950	Op	223	16000	7100	S 36x8	S 36x10	Own	6-4 1/2 x 5 1/2	400.0	40.8	75-1800	L	G	2 1/2	9 1/2	4	FP	On	Str	V	A-L	A-L	24		
25	Amer. La France W2R	3950	Op	223	16000	7100	S 36x8	S 36x10	Own	6-4 1/2 x 5 1/2	400.0	40.8	75-1800	L	G	2 1/2	9 1/2	4	FP	On	Str	V	A-L	A-L	25		
26	Amer. La Fra. Chieftain	Op	Op	16200	7200	P 36x8	DP36x8	Own	6-4 1/2 x 5 1/2	411.0	40.8	75-1800	L	G	2 1/2	9 1/2	4	FP	On	Str	V	A-L	A-L	26			
27	Armeder	31	2600	Op	199	12850	P 32x6	DP32x6	Her WXB	6-3 1/2 x 4 1/2	298.0	33.7	66-2200	L	G	2 1/2	10 1/2	4	FP	On	Str	V	A-L	A-L	27		
28	Atterbury	R	3700	173	199	7250	P 34x7	DP34x7	Con 18R	6-4 x 4 1/2	340.0	38.4	82-2400	H	G	2 1/2	12 1/2	7	PC	Ha	Str	V	A-L	A-L	28		
29	Autocar	R	3750	114	203	19000	P 34x7	DP34x7	Own	6-4 1/2 x 5 1/2	350.0	32.4	85-1450	L	G	2 1/2	12 1/2	2	SP	Bi	Str	V	A-L	A-L	29		
30	Autocar	SH	4300	114	203	19000	P 34x7	DP34x7	Own	6-4 1/2 x 5 1/2	404.0	43.4	90-2000	L	G	2 1/2	14 1/2	7	FP	Ha	Str	V	A-L	A-L	30		
31	Autocar	SCB	4300	157	203	19000	P 34x7	DP34x7	Own	6-4 1/2 x 5 1/2	404.0	43.4	90-2000	L	G	2 1/2	14 1/2	7	FP	Ha	Str	V	A-L	A-L	31		
32	Available T-39, T-40V	Op	Op	19000	7800	P 36x8	DP36x8	Wau KU	6-4 1/2 x 4 1/2	404.0	43.4	87-2500	L	G	2 1/2	13 1/2	7	FP	Wa	Str	V	A-L	A-L	32			
33	Available T-41	Op	Op	19000	7800	P 36x8	DP36x8	Wau KU	6-4 1/2 x 4 1/2	404.0	43.4	87-2500	L	G	2 1/2	13 1/2	7	FP	Wa	Str	V	A-L	A-L	33			
34	Available T-43, T-44V	Op	Op	19000	7800	P 36x8	DP36x8	Wau SRL	6-4 1/2 x 4 1/2	404.0	43.4	87-2500	L	G	2 1/2	13 1/2	7	FP	Wa	Str	V	A-L	A-L	34			
35	Brookway	190	168	204	19000	6920	P 34x7	DP34x7	Wau H	6-4 x 5	377.0	38.4	72-2000	H	G	2 1/2	10 1/2	4	PC	KP	Str	V	A-L	A-L	35		
36	Brookway	190	168	204	19000	6920	P 34x7	DP34x7	Con 33B	6-4 1/2 x 4 1/2	380.9	40.8	89-2400	H	C	2 1/2	13 1/2	7	FP	KP	Str	V	A-L	A-L	36		
37	Brookway	195	170	224	19500	7500	P 34x7	DP34x7	Con 33B	6-4 1/2 x 4 1/2	380.9	40.8	89-2400	H	C	2 1/2	13 1/2	7	FP	KP	Str	V	A-L	A-L	37		
38	Chicago	1-26-A	2050	154	202	15850	P 36x8	DP36x8	Wau 6ML	6-4 x 4 1/2	312.0	38.4	77-2200	L	G	2 1/2	12 1/2	7	FP	Wa	Str	V	A-L	A-L	38		
39	Clinton	65	184	Op	15175	5925	S 34x5	DS34x5	Bud ETU	4-4 1/2 x 5 1/2	312.0	38.4	77-2200	L	G	2 1/2	12 1/2	7	FP	Wa	Str	V	A-L	A-L	39		
40	Clinton	65	184	Op	15175	5925	S 34x5	DS34x5	Bud DW 6	6-3 1/2 x 5	330.0	33.7	73-2400	L	G	2 1/2	9 1/2	4	FP	No	Str	V	A-L	A-L	40		
41	Coleman	D40	130	180	16600	8500	P 40x8	P 40x8	Bud DW 6	6-3 1/2 x 5	330.0	33.7	72-2600	L	G	2 1/2	9 1/2	4	FP	No	Str	V	A-L	A-L	41		
42	Concord	JX-6	4200	154	174	17200	P 34x7	DP34x7	Bud DW 6	6-3 1/2 x 5	330.0	33.7	72-2600	L	G	2 1/2	9 1/2	4	FP	No	Str	V	A-L	A-L	42		
43	Corbett	1586	174	220	18500	5870	P 34x7	DP34x7	Con 16R	6-4 x 4 1/2	311.0	38.4	72-2400	H	C	2 1/2	11 1/2	7	PC	No	Str	V	A-L	A-L	43		
44	Corbett	1586	174	220	18500	5870	P 34x7	DP34x7	Con 16R	6-4 x 4 1/2	311.0	38.4	72-2400	H	C	2 1/2	11 1/2	7	PC	No	Str	V	A-L	A-L	44		
45	Corbett	1586	174	220	18500	5870	P 34x7	DP34x7	Con 18R	6-4 x 4 1/2	311.0	38.4	72-2400	H	C	2 1/2	11 1/2	7	PC	No	Str	V	A-L	A-L	45		
46	Day-Elder	JF	3900	156	204	14900	P 34x7	DP34x7	Con 18R	6-4 x 4 1/2	311.0	38.4	72-2400	H	C	2 1/2	11 1/2	7	PC	No	Str	V	A-L	A-L	46		
47	Diamond T	602	3440	169	231	19000	P 36x8	DP36x8	Her YXC	6-4 1/2 x 4 1/2	428.4	45.9	94-2200	L	G	2 1/2	15 1/2	7	PC	Ha	Str	V	A-L	A-L	47		
48	Diamond T	606	3500	176	242	19000	P 36x8	DP36x8	Her YXC	6-4 1/																	

Line Number	Radiator Make	Type and Make	Gear Set		Universal Make and No.	Rear Axle		Front Axle	Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
			Make and Model	Location		Final Drive and Type	Drive and Torque		Reduc. in High	Reduc. in Low	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type			Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
																								No. of Forward Speeds	Aux. Locat. and Speeds	Gear Ratios	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type

Line Number	Make, Model and Capacity	General		Tire Size		Engine										Fuel System		Electrical System		Line Number							
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings		Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
3 Ton—Cont'd																											
1	Mack	5900	168	184	12000	8950	S 36x8	DP36x8	Own BK	6-4 1/2 x 5 1/2	298.2	33.7	67-2400	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	N-E	N-E	1	
2	Moreland	3750	184	204	14475	4750	P 32x6	DP32x6	Her WXB	6-3 1/2 x 4 1/2	298.2	33.7	67-2400	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	2	
3	Noble	3350	176	204	14475	5975	P 34x7	DP34x7	Con 18R	6-4 x 4 1/2	340.0	38.4	82-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	3	
4	Omort	300	130	Op	16000	5800	P 34x7	DP34x7	Her OXC	6-4 1/2 x 5	283.5	28.9	56-2000	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	4	
5	Omort	3005	130	Op	16000	6000	P 34x7	DP34x7	Her WXB	6-3 1/2 x 4 1/2	298.2	33.7	66-2400	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	5	
6	Pierce-Arrow	XB	150	180	16500	6280	S 36x5	DS36x5	Own XB	4-4 1/2 x 5 1/2	332.0	32.4	73-2200	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	6	
7	Relay	50	4130	161	13850	7200	P 36x6	DP40x8	Bud DW6	6-3 1/2 x 5	330.0	33.7	73-2200	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	7	
8	Relay	60D1P	4595	175	192	7500	P 36x6	DP38x7	Bud BA6	6-4 1/2 x 5 1/2	410.9	40.8	83-2000	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	8	
9	Relay	80	5330	175	192	8400	P 36x6	S 40x10	Bud BA6	6-4 1/2 x 5 1/2	411.0	40.8	83-2000	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	9	
10	Reo	GA	2035	163	13850	4625	P 32x6	DP32x6	Own	6-3 1/2 x 5	268.3	27.3	67-2800	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	10	
11	Reo	GC	2140	179	13850	4850	P 32x6	DP32x6	Own	6-3 1/2 x 5	268.3	27.3	67-2800	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	11	
12	Reo	GD	1985	144	13850	4570	P 32x6	DP32x6	Own	6-3 1/2 x 5	268.3	27.3	67-2800	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	12	
13	Reo	GCS	2375	210	210	5320	P 32x6	DP32x6	Own	6-3 1/2 x 5	268.3	27.3	67-2800	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	13	
14	Sanford	F	170	170	13000	4750	P 32x6	DP32x6	Con 16R	6-4 1/2 x 4 1/2	311.0	38.4	72-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	14	
15	Sanford	FL	160	185	13000	4950	P 32x6	DP32x6	Con 16R	6-4 1/2 x 4 1/2	311.0	38.4	72-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	15	
16	Schacht DeLux	25	160	199	15000	5600	B 8.25/20	DB8.25/20	Her WXB	6-3 1/2 x 4 1/2	298.0	33.7	66-2200	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	16	
17	Selden	47CB	151	184	15000	7200	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	332.0	32.4	73-2200	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	17	
18	Service	60	4680	175	192	7100	P 36x6	DP38x7	Bud BUS	6-4 1/2 x 5 1/2	386.4	38.4	73-2000	L	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	18	
19	Sterling DW13-65XK	33X	3290	165	235	5500	S 34x4	S 34x7	Wau 6XK	6-3 1/2 x 4 1/2	298.0	33.7	66-2400	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	19	
20	Stewart	33X	3290	165	235	6450	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	354.0	36.2	90-2750	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	20	
21	Ward La France 25R	2075	193	205	13000	6000	B 7.50/20	DB7.50/20	Wau 6ML	6-4 1/2 x 4 1/2	358.38	4.0	77-2200	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	21	
22	Ward La France 25B	235B	3150	194	206	6000	B 7.50/20	DB7.50/20	Wau 6ML	6-4 1/2 x 4 1/2	358.38	4.0	77-2200	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	22	
23	White	58	4400	180	195	7797	S 36x5	DP36x5	Own GRB	6-4 1/2 x 5 1/2	326.3	32.4	81-1800	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	23	
24	White	64	6300	180	215	9150	P 36x8	DP36x8	Own 1AB	6-4 1/2 x 5 1/2	518	45.9	100-2000	4	C	C	3	15 1/4	7	PC	No	Str	V	A-L	A-L	24	
25	Witt-Will	R3B	3400	159	15500	6500	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339.2	38.4	82-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	25	
26	Witt-Will	R3	159	15500	6500	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339.2	38.4	82-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	26		
3 1/2 Ton																											
27	Aeme	45D	3740	125	Op	14050	4850	P 34x7	B 10.50/20	Her OXC	4-4 1/2 x 5	283.5	28.9	55-2000	L	G	C	2	9 1/4	3	PC	No	Str	V	A-L	A-L	27
28	Amer. La France W2R	4950	Op	Op	223	7100	S 36x5	S 36x10	Own 2R	4-4 1/2 x 6	340.4	28.9	42-1400	L	G	C	2 1/2	9 1/4	3	PC	No	Str	V	A-L	A-L	28	
29	Amer. La France Chief	Op	Op	Op	223	8100	S 36x5	S 36x10	Opt	4-4 1/2 x 6	340.4	28.9	42-1400	L	G	C	2 1/2	9 1/4	3	PC	No	Str	V	A-L	A-L	29	
30	Autocar	HS	4100	114	203	24000	6900	S 36x4	S 36x12	Own	4-4 1/2 x 5 1/2	350.0	32.4	45-1450	L	G	C	2 1/2	10 1/4	2	PC	No	Str	V	A-L	A-L	30
31	Autocar	SHS	4800	114	203	24000	7900	P 40x8	DP40x8	Own	6-4 1/2 x 4 1/2	404.0	43.4	90-2000	L	G	C	3	11 1/4	2	PC	No	Str	V	A-L	A-L	31
32	Autocar	TAA	5350	192	242	22000	8900	P 36x8	DP36x8	Own	6-4 1/2 x 4 1/2	404.0	43.4	90-2000	L	G	C	3	11 1/4	2	PC	No	Str	V	A-L	A-L	32
33	Available	T-45	Op	Op	8800	P 40x8	DP40x8	Wau 6AB	6-4 1/2 x 5 1/2	459	38.4	100-2400	L	G	C	3	11 1/4	2	PC	No	Str	V	A-L	A-L	33		
34	Brockway	120	170	224	22000	8200	P 36x8	DP36x8	Con 34B	6-4 1/2 x 4 1/2	390.9	40.8	85-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	34	
35	Brockway	220	170	224	22000	8200	P 36x8	DP36x8	Con 34B	6-4 1/2 x 4 1/2	390.9	40.8	85-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	35	
36	Chicago	35C	Op	Op	8570	S 36x5	S 36x10	Wau CU	6-4 1/2 x 5 1/2	346.0	36.2	90-2750	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	36		
37	Clinton	85-6	4400	190	Op	16975	5975	P 34x7	Bud BUS	6-4 1/2 x 5 1/2	386.4	38.4	74-2400	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	37	
38	Coleman-40X 3 1/2	55	130	184	21100	9700	P 40x8	P 40x8	Bud BA6	6-4 1/2 x 5 1/2	411.0	40.8	85-2400	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	38	
39	Commerce	80	6250	175	192	8200	P 36x6	S 36x12	Bud BA6	6-4 1/2 x 5 1/2	411.0	40.8	85-2400	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	39	
40	Concord	JLX-6	4500	202	222	19400	7000	P 34x7	Bud BA6	6-4 1/2 x 5 1/2	411.0	40.8	85-2400	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	40	
41	Corbitt	15B6	174	220	19400	5870	P 34x7	DP34x7	Con 16R	6-4 1/2 x 4 1/2	311.0	38.4	72-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	41	
42	Corbitt	15W6	183	224	19400	6160	P 34x7	DP34x7	Con 16R	6-4 1/2 x 4 1/2	311.0	38.4	72-2400	H	C	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	42	
43	Diamond T	700	3740	172	202	24000	8200	P 36x5	S 36x10	Her WXB	6-4 1/2 x 5 1/2	428.4	45.9	87-2200	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V	A-L	A-L	43
44	Duplex	EF	130	184	17000	6500	S 36x8	S 36x8	Bud EBU-I	6-4 1/2 x 5 1/2	312.0	28.9	57-2100	L	G	C	2 1/2	10 1/4	3	PC	No	Str	V	A-L	A-L	44	
45	Freeman BASP 3 1/2	5500	144	144	144	7760	P 38x9	DP38x9	Bud BA6	6-4 1/2 x 5 1/2	411.0	40.8	78-2250	L	G	C	2 1/2	13 1/4	7	PC	No	Str	V</				

Line Number	Clutch		Gear Set		Universal Make and No.	Rear Axle		Front Axle		Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number					
	Radiator Make	Type and Make	Make and Model	Location		Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cap to Rear of Frame			Cap to Rear Axle	Width of Frame	Front	Rear	
				No. of Forward Speeds																				Aux. Locat. and Speeds
1	Own	P. Own	Own AL	A	4	Spl	Own AL	2F	5.88 30.9	Own AK	L4IH	391	Own	9 1/2 x 3 1/2 x 1/2	C	144	80		40x2 1/2	54x2 1/2		1		
2	Lon	P.B-L	B-L 35	U	4	Opt	Cle	Tim 63721 H	WF	6.5 34.8	Tim 14703 H	L4IH	660	Ros	6 1/2 x 3 1/2 x 1/2	C	144	80		40x2 1/2	54x2 1/2		2	
3	Chi	D. Ful	FulMGU	A	4	No	Blo	Tim 58200H	BF	6.5 34.8	Shu 5510	W2IM	250	Ros	6 1/2 x 3 1/2 x 1/2	C	144	80		40x2 1/2	54x2 1/2		3	
4	You	D. Ful	FulGOG	A	4	No	Blo	Wis 8817	2F	5.37 69.4	Shu 5510	W2IM	250	Ros	6 1/2 x 3 1/2 x 1/2	C	144	80		40x2 1/2	54x2 1/2		4	
5	Mod	D. Ful	FulGOG	A	4	No	Blo	Wis 8817	2F	5.37 69.4	Shu 5510	W2IM	250	Ros	6 1/2 x 3 1/2 x 1/2	C	144	80		40x2 1/2	54x2 1/2		5	
6	Own	D. Own	Own XB	U	5	...	Blo	Own XB	W 1/2	9.25 48.1	Own XB			Own			125	72 1/2					6	
7	Lon	D.B-L	B-L 51	U	5	...	Blo	Own 60	RF	7.88 58.5	Tim 14704 H			Own			144	82					7	
8	Lon	Ful	Ful VU	U	5	...	Blo	Own	RF	7.88 58.5	Tim 15733 H			Own			156	97 1/2					8	
9	Lon	P.B&B	Cov SHO	A	8	...	Blo	Own 74	RF	9.95 84.2	Tim 16302			Ros			144	94 1/2					9	
10	Own	D.B-L	Own	U	4	Opt	Cle	Own	RF	6.14 40.5	Own	L4IH	344	Han	7x3 1/2 x 1/2	C	127	78 1/2	40 1/2	38x2 1/2	50x3		10	
11	Own	D.B-L	Own	U	4	Opt	Cle	Own	RF	6.14 40.5	Own	L4IH	344	Han	7x3 1/2 x 1/2	C	127	78 1/2	40 1/2	38x2 1/2	50x3		11	
12	Own	D.B-L	Own	U	4	Opt	Cle	Own	RF	6.14 40.5	Own	L4IH	344	Han	7x3 1/2 x 1/2	C	86 1/2	59 1/2	40 1/2	38x2 1/2	50x3		12	
13	Own	D.B-L	Own	U	4	A2	Cle	Own	RF	6.14 40.5	Own	L4IH	344	Han	7x3 1/2 x 1/2	C	86 1/2	59 1/2	40 1/2	38x2 1/2	50x3		13	
14	Fed	D.B-L	B-L	U	4	...	Blo	Eat	B 1/2	6.87 37.8	Eat			Ros			144	82					14	
15	Fed	D.B-L	B-L 35	U	4	...	Blo	Eat 2002	B 1/2	6.87 37.8	Eat			Ros			144	82					15	
16	Own	D.B-L	B-L 35	U	4	No	Spl	Tim 56000 H	BF	6.17 35.0	Tim 14703 H	L4IH	578	Ros	7x3 1/2 x 1/2	C	Opt	Opt	31 1/2	40x2 1/2	50x3		16	
17	Own	D.B-L	B-L	U	4	...	Blo	Tim	WF	6.17 35.0	Tim			Ros			132	84					17	
18	Lon	D.B-L	B-L 51	U	5	...	Blo	Tim 65706DH	WF	8.5 63.0	Tim 15733 H	L4IH		Han	6x2 1/2 x 1/2	C	Opt	Opt	72 1/2	33 1/2	48x3	54x3	18	
19	Hex	D.B-L	B-L 51	U	5	No	Spl	Wis 8317L	WF	8.25 49.2	Shu 5429	L4IH	398	Han	6x2 1/2 x 1/2	C	122 1/2	72 1/2	33 1/2	48x3	54x3		19	
20	Mod	D. Ful	Ful R 314	U	4	Opt	Spl	Tim	WF	8.25 49.2	Shu 5429	B4IM		TX	Ros	9x2 1/2 x 1/2	C	136 1/2	79 1/2	32	40x2 1/2	50x3		20
21	Mod	P.B-L	B-L 314	U	4	Opt	Cle	Tim	WF	8.25 49.2	Shu 5429	L4IHV		TX	Ros	12x3 1/2 x 1/2	P	Opt	Opt	32	40x2 1/2	50x3		21
22	Mod	P.B-L	B-L 314	U	4	Opt	Cle	Tim	WF	8.25 49.2	Shu 5429	L4IHV		TX	Ros	12x3 1/2 x 1/2	P	168	108	33	40x2 1/2	60x3		22
23	Own	P. Own	Own 4B	U	4	Opt	Spl	Own	2F	7.6 49.7	Own	OPIM	224	21	Own	8 1/2 x 3 1/2 x 1/2	C	148 1/2	93 1/2	34 1/2	40 1/2 x 3	56x3 1/2		23
24	Own	dp. Own	Own 7B	U	4	Opt	Spl	Own 2C	2F	7.6 49.7	Own 9D	O2IA	283	21	Own	8 1/2 x 3 1/2 x 1/2	C	156 1/2	91 1/2	34 1/2	42x3	56x3 1/2		24
25	Per	D.B-L	B-L 51	U	4	No	Spl	Tim 58000H	BF	6.83 36.5	Tim 15733 H	L4IHV		CD	Ros	7x2 1/2 x 1/2	C	76	32	41x2 1/2	54x3		25	
26	Per	D.B-L	B-L 51	U	4	No	Spl	Tim 65001H	WF	7.0 37.4	Tim 15733 H	L4IHV		CD	Ros	7x2 1/2 x 1/2	C	76	32	41x2 1/2	54x3		26	
27	Per	D.B-L	B-L 51 5	U	5	No	Blo 2	Wis 8817B	2F	9.4 56.1	Shu 510	W2IM	534	21	Ros	6x3 1/2 x 1/2	P	70 1/2	54 1/2	34	40x2 1/2	45x3	N	27
28	Bus	D. Own	Own 2R	A	4	...	Own	Own 2R	2F	9.98 53.4	Own 2R	O2FXM	...	2X	Ros	8x2 1/2 x 1/2	T	132	81 1/2					28
29	G&O	P. Own	Own 2R	A	4	...	Own	Own 2R	2F	9.98 53.4	Own 2R	O2FXM	...	2X	Ros	8x2 1/2 x 1/2	T	132	81 1/2					29
30	G&O	P. Own	Own 2R	A	4	...	Own	Own 2R	2F	9.98 53.4	Own 2R	O2FXM	...	2X	Ros	8x2 1/2 x 1/2	T	132	81 1/2					30
31	Own	P. Own	Own 2R	A	4	...	Own	Own 2R	2F	9.98 53.4	Own 2R	O2FXM	...	2X	Ros	8x2 1/2 x 1/2	T	132	81 1/2					31
32	Own	P. Own	Own 2R	A	4	...	Own	Own 2R	2F	9.98 53.4	Own 2R	O2FXM	...	2X	Ros	8x2 1/2 x 1/2	T	132	81 1/2					32
33	Own	P. Own	Own 2R	A	4	...	Own	Own 2R	2F	9.98 53.4	Own 2R	O2FXM	...	2X	Ros	8x2 1/2 x 1/2	T	132	81 1/2					33
34	You	D.B-L	B-L 60	U	7	No	Blo	Tim 65704	WF	8.5 80.7	Shu 615	21		CD	Ros	7x2 1/2 x 1/2	P	Opt	Opt	32	40x2 1/2	50x3	34	
35	G&O	D.B-L	B-L 554	U	4	No	Blo 3	Wis 1237H	2F	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	35	
36	G&O	D.B-L	B-L 554	U	4	No	Blo 3	Wis 1237H	2F	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	36	
37	Chi	D.B-L	B-L 554	U	4	No	Blo 3	Wis 1237H	2F	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	37	
38	Per	D.B-L	B-L 554	U	4	No	Blo 3	Wis 1237H	2F	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	38	
39	R-T	D. Ful	Ful R U16	U	8	A 2	Spl	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	39	
40	Lon	P. Own	Own 4B	U	4	Opt	Spl	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	40	
41	Own	D.B-L	B-L 51	U	4	No	Blo	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	41	
42	Per	D.B-L	B-L 51	U	4	No	Blo	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	42	
43	Per	D.B-L	B-L 51	U	4	No	Blo	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	43	
44	G&O	D. Cov	Cov	U	4	No	Spl 4	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	44	
45	Lon	D.B-L	B-L	U	8	A 2	Pet	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	45	
46	Lon	D. Ful	Ful H U 16	U	8	A 2	BC	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	46	
47	Per	O. H-S	Own	U	8	A 2	BC	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	47	
48	Lon	P. Own	Own 4B	U	4	Opt	Spl	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	48	
49	Own	D. Own	Own 4B	U	4	Opt	Spl	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	49	
50	McC	D. Own	Own 4B	U	4	Opt	Spl	Tim 65706H	WF	8.5 80.7	Shu 552B	L4IHV		CD	Ros	8 1/2 x 3 1/2 x 1/2	T	142	84	34 1/2	40x2 1/2	54x3	50	
51	Own	D.B-L	B-L 55-7	U	7	No	Spl	Tim 65706H	WF	8.5														

Line Number	Make, Model and Capacity	General			Tire Size		Engine										Fuel System		Electrical System		Line Number							
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System		Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make		
4 Ton—Cont'd																												
1	Indiana.....138	163	199	21000	7800	S 36x5	S 36x12	Her L	4-4 1/2 x 5 1/2	365.8	32.4	58-1600	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
2	Indiana.....638	174	210	21000	8100	S 36x5	S 36x12	Wis H	6-4 x 5 1/2	377	38.4	72-2000	H	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
3	Kenworth.....240	5450	170	221	24000	7700	P 36x8	DP36x8	Her YXC2	4-4 1/2 x 5 1/2	453	48.6	99-2200	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2	
4	Kissel.....Heavy Duty	5000	168	18500	7600	S 36x5	S 36x12	Wau DU	4-4 1/2 x 5 1/2	312	32.4	36-1200	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
5	Kleiber.....	171	191	20000	6900	P 36x8	DP36x8	Bud BA 6	4-4 1/2 x 5 1/2	411	40.8	90-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
6	LaFrance-Republic, M-1	5500	148	188	8600	P 40x8	DP40x8	Her YXC	4-4 1/2 x 5 1/2	428	45.9	94-2200	L	G C C 3	15	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
7	Lange.....F6	177	220	18500	7500	S 36x5	DS36x5	Bud BA 6	4-4 1/2 x 5 1/2	428	45.9	94-2200	L	G C C 3	15	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
8	Maccar.....BJ	5800	168	18500	8550	P 36x8	DP36x8	OwN BK	6-4 1/2 x 5 1/2	428	45.9	94-2200	L	G C C 3	15	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
9	MacK.....	5800	168	18500	8550	P 36x8	DP36x8	OwN BK	6-4 1/2 x 5 1/2	428	45.9	94-2200	L	G C C 3	15	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
10	Mopland.....BD 7	3565	184	16000	6000	P 34x7	P 34x7	Her WXB	6-3 1/2 x 4 1/2	298.2	33.7	67-2400	L	G C C 2 1/2	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
11	Noble.....	166C	4500	180	207	19870	8670	P 34x7	DP34x7	Con 20R	4-4 1/2 x 5 1/2	381	40.8	88-2400	H	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2
12	Pierce-Arrow.....WC	5100	162	180	8490	S 36x5	DS36x5	OwN WC	4-4 1/2 x 5 1/2	411	40.8	90-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
13	Relay.....	80	5380	175	192	18000	6850	P 32x9	DP42x9	Wau 6K8	4-4 1/2 x 5 1/2	453	48.6	101-2400	L	G C C 3	14	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2
14	Sanford.....	159	188	18500	6640	P 34x7	DP34x7	Bud BA 6	6-3 1/2 x 5 1/2	411	40.8	90-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
15	Schacht.....De Luxe 30	174	199	16700	6900	P 9.00/20	DB 9.00/20	Her WXC	6-4 1/2 x 5 1/2	339	38.4	73-2200	L	G C C 2 1/2	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
16	Selden.....47 CD	151	184	16700	7600	P 36x8	DP36x8	Con 18R	6-4 1/2 x 5 1/2	339	38.4	73-2200	L	G C C 2 1/2	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
17	Service.....	80	5330	175	192	18000	8400	S 36x6	S 36x14	Bud BA 6	6-4 1/2 x 5 1/2	411	40.8	90-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2
18	Sterling.....DW18-64KS	106	180	18000	9500	P 42x9	DP42x9	Wau 6K8	6-4 1/2 x 5 1/2	453	48.6	101-2400	L	G C C 3	14	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
19	Ward La France 35R	4625	Op	21000	8100	P 9.00/20	DB 9.00/20	Wau SRL	6-4 1/2 x 5 1/2	462	45.9	97-2000	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
20	Ward La France 41E3	4450	Op	21000	8100	P 9.00/20	DB 9.00/20	Wau SRL	6-4 1/2 x 5 1/2	462	45.9	97-2000	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
21	Witt-Will.....R4X	4440	Op	21000	8000	P 36x8	DP36x8	Con 20R	6-4 1/2 x 5 1/2	427	45.9	100-2600	H	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
22	Witt-Will.....R4X	4600	Op	21000	8000	P 36x8	DP36x8	Con 20R	6-4 1/2 x 5 1/2	427	45.9	100-2600	H	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
4 1/2 Ton																												
23	Sterling.....DC19-64XK	163	177	23000	6500	S 36x5	S 36x10	Wau 6XK	6-3 1/2 x 4 1/2	462	45.9	97-2000	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
24	Ward La France 45D	4875	Op	23000	8600	P 36x8	DP36x8	Wau SRL	6-4 1/2 x 5 1/2	462	45.9	97-2000	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
5 Ton																												
25	Ame.....90L	4675	192	Op	21500	9100	S 36x5	S 40x12	Con B7	4-4 1/2 x 5 1/2	471.2	40.0	62-1500	L	G C C 2 1/2	10	3	PS	On	Str	V	Elis	A-Bo	Abol	25			
26	Amer. LaFrance 5R	5500	Op	23000	9800	S 36x6	DS40x6	OwN 5R	4-4 1/2 x 5 1/2	425.2	36.2	50-1200	L	G C C 2 1/2	9	3	PS	On	Str	V	Elis	A-Bo	Abol	26				
27	Am. LaF. Bldg., Ch. 10	6725	226	242	24000	10600	P 40x8	DP40x8	OwN	4-4 1/2 x 5 1/2	572.5	48.6	115-1600	L	G C C 3	10	3	PS	On	Str	V	Elis	A-Bo	Abol	27			
28	Armleder.....	61	500	Op	19420	6620	P 36x8	DP36x8	Her WXC2	4-4 1/2 x 5 1/2	360	40.8	80-2200	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2	
29	Autocar.....C	5550	172	20000	9300	P 38x9	DP42x9	OwN	6-4 1/2 x 5 1/2	453	48.6	101-2400	L	G C C 3	14	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
30	Autocar.....TFA	6100	192	242	20000	9300	P 38x9	DP38x9	OwN	6-4 1/2 x 5 1/2	453	48.6	101-2400	L	G C C 3	14	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2	
31	Brookway.....	178	208	28000	10500	S 36x6	S 40x14	Con B7	4-4 1/2 x 5 1/2	471.2	40.0	53-1000	L	G C C 2 1/2	7	3	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
32	Brookway.....	250	182	224	25000	10000	P 40x8	DP40x8	Con 34B	4-4 1/2 x 5 1/2	427.5	45.9	100-2400	H	G C C 2 1/2	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2	
33	Chicago.....1-56-D	4300	140	236	7914	B9.75/20	DB9.75/20	Wau 6SRL	4-4 1/2 x 5 1/2	462	45.9	97-2000	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
34	Clinton.....120L	5500	204	Op	27050	9550	S 36x6	DS40x7	Bud BTU	4-4 1/2 x 5 1/2	510.5	40.0	61-1400	L	G C C 2 1/2	12	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2	
35	Clinton.....120L	5500	204	Op	27050	9550	S 36x6	DS40x7	Bud BTU	4-4 1/2 x 5 1/2	510.5	40.0	61-1400	L	G C C 2 1/2	12	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2	
36	Coleman X-100 5-6 T	144	184	24300	11200	P 42x9	P 42x9	Bud BA 6	6-4 1/2 x 5 1/2	411	40.8	85-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
37	Coleman X-100F 5-7 1/2	144	184	24300	11200	P 42x9	P 42x9	Bud BA 6	6-4 1/2 x 5 1/2	411	40.8	85-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
38	Commerce.....	100	5830	175	192	18000	9600	S 36x6	S 40x14	Bud BA 6	6-4 1/2 x 5 1/2	411	40.8	85-2400	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2
39	Corbett.....33W6	195	220	33200	9650	S 36x6	DS40x6	Con 21R	6-4 1/2 x 5 1/2	428.4	45.9	100-2600	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
40	Corbett.....24W6	195	220	33200	9650	P 36x8	DP36x8	Con 20R	6-4 1/2 x 5 1/2	428.4	45.9	100-2600	L	G C C 3	13	7	FP	Ha	Str	V	Elis	A-L	2	2	2	2		
41	Diamond T.....	100	4420	171	201	28000	9700	S 36x6	S 40x12	Her YXC2	4-4 1/2 x 5 1/2	453	48.6	100-2200	L	G C C 2 1/2	12	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2
42	Douglas.....F4	5525	185	Op	26000	9200	S 36x6	S 40x12	Her YXC2	4-4 1/2 x 5 1/2	453	48.6	100-2200	L	G C C 2 1/2	12	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2	
43	Douglas.....F6	6300	196	Op	26000	9200	P 9.75/38	DB9.75/38	Bud GL6	6-4 1/2 x 5 1/2	572.5	48.6	114-1900	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2	
44	Duplex.....M 5-7 Ton	7650	Op	28000	10000	P 34x7	DS36x7	Bud GL6	6-4 1/2 x 5 1/2	572.5	48.6	114-1900	L	G C C 3	10	3	PC	Pe	Str	V	Elis	A-L	2	2	2	2		
45	Fisher-Standard.....100C	200	240	25000	9000	P 36x8	DP36x8	Con 21R	6-4 1/2 x 5 1/2	427.5	45.9	102-2400	H	G C C 2 1/2														

Line Number	Radiator Make	Clutch	Gear Set	Type and Make	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Universals Make and No.	Make and Model	Rear Axle			Front Axle			Brakes			Frame		Body Mounting Data		Springs			Auxiliary Type	Line Number	
										Final Drive and Type	Drive and Torque	Reduc. in High	Gear Ratios	Reduc. in Low	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front			Rear
1	McC	P.B.&B	B-L 60	A	U	7	No	Spl	Tim 66700D	WF	R 8.75 83.1	Shu 5550	T21M	232	RI	Ros	7x3x $\frac{1}{2}$	C	132	84 $\frac{1}{2}$	33	40x2 $\frac{1}{2}$	50x3 $\frac{1}{2}$	N	2			
2	Lon	P.B.&B	B-L 60 Max	A	U	7	No	Spl	Tim 66700	WF	R 8.75 83.1	Shu 5550	T21M	232	RI	Ros	7x3x $\frac{1}{2}$	C	132	84 $\frac{1}{2}$	33	40x2 $\frac{1}{2}$	50x3 $\frac{1}{2}$	N	3			
3	Per	D.B.-L	B-L 55&60	A	U	7	No	Spl	Tim 66704D H	WF	H 11.7 73.6	Tim 26450 H	T21M	770	TD	Ros	9x3x $\frac{1}{2}$	C	126	86 $\frac{1}{2}$	33	42x2 $\frac{1}{2}$	56x3 $\frac{1}{2}$	N	4			
4	McC	D.W.-G	Ful H	A	U	7	No	Spl	Tim 16302	WF	H 11.7 73.6	Tim 66700	T41H	21	TD	Ros	8x3x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	5			
5	Fed	D.B.-L	B-L 60	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	6			
6	Own	D.B.-L	B-L 60	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	7			
7	Mod	D.B.-L	B-L 60 Max	A	U	7	No	Spl	Wls 1552B	2F	H 10.0 95.0	Tim 16300	W21M	802	FD	Ros	8x3x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	8			
8	Own	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 65702D	WF	R 8.5 45.4	Tim 15302	2MV	TX	TX	Own	7x3x $\frac{1}{2}$	C	151	95	33	42x3	56x3	N	9			
9	Own	P.Own	Own AL	A	U	7	No	Spl	Tim 65702D	WF	R 8.5 45.4	Tim 15302	2MV	TX	TX	Own	7x3x $\frac{1}{2}$	C	151	95	33	42x3	56x3	N	10			
10	Lon	P.B.-L	B-L 35	A	U	4	Op	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	11			
11	Chi	D.Ful	Ful H	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	12			
12	Own	D.Own	Own WC	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	13			
13	Lon	P.B.&B	Cov SHO	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	14			
14	Fed	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	15			
15	You	D.Ful	Ful MG U	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	16			
16	Own	D.B.-L	B-L 51	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	17			
17	Lon	D.Own	B-L 60 Max	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	18			
18	Hex	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	19			
19	Own	P.B.-L	B-L	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	20			
20	Own	P.B.-L	B-L	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	21			
21	Per	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	22			
22	Per	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	23			
23	Hex	D.B.-L	B-L 51	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	24			
24	Own	P.B.-L	B-L	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	25			
25	Per	D.B.-L	B-L 60-7	A	U	7	No	Spl	Tim 66700	WF	R 8.75 83.1	Tim 16300	T21M	495	2RI	Ros	9x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	168 $\frac{1}{2}$	105 $\frac{1}{2}$	37	44x3	34x3 $\frac{1}{2}$	N	26			
26	Own	D.Own	Own 5R	A	U	7	No	Spl	Tim 66700	WF	R 8.75 83.1	Tim 16300	T21M	495	2RI	Ros	9x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	168 $\frac{1}{2}$	105 $\frac{1}{2}$	37	44x3	34x3 $\frac{1}{2}$	N	27			
27	Own	D.Own	Own 5R	A	U	7	No	Spl	Tim 66700	WF	R 8.75 83.1	Tim 16300	T21M	495	2RI	Ros	9x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	168 $\frac{1}{2}$	105 $\frac{1}{2}$	37	44x3	34x3 $\frac{1}{2}$	N	28			
28	Own	D.Ful	Ful MG U	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	29			
29	Own	D.B.-L	Own B	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	30			
30	Own	D.B.-L	Own B	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	31			
31	Bus	D.B.-L	B-L 60 Max	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	32			
32	Lon	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	33			
33	Chi	D.B.-L	B-L 60 Max	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	34			
34	Own	D.B.-L	B-L 60	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	35			
35	Own	D.B.-L	B-L 60 Max	A	U	7	No	Spl	Tim 65706H	WF	R 8.85 53.0	Shu 5572	T21M	870	TD	Ros	7x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	139	89 $\frac{1}{2}$	34	44x2 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	36			
36	R-T	D.Ful	Ful R U 16	A	U	7	No	Spl	Wls 122	2F	H 8.5 44.1	Wls 122F	W21M	TD	TD	Ros	14x2 $\frac{1}{2}$ x1 $\frac{1}{2}$	C	168	105	30	48x3 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	37			
37	Per	D.Ful	Ful H U 16	A	U	7	No	Spl	Wls 122	2F	H 8.5 44.1	Wls 122F	W21M	TD	TD	Ros	14x2 $\frac{1}{2}$ x1 $\frac{1}{2}$	C	168	105	30	48x3 $\frac{1}{2}$	52x3 $\frac{1}{2}$	N	38			
38	Lon	D.Own	B-L 60 Max	A	U	7	No	Spl	Tim 68700DP	WF	R 10.0 95.0	Tim 17300	T21M	495	2RI	Ros	9x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	168 $\frac{1}{2}$	105 $\frac{1}{2}$	37	44x3	34x3 $\frac{1}{2}$	N	39			
39	Per	D.B.-L	B-L 60 Max	A	U	7	No	Spl	Tim 68700DP	WF	R 10.0 95.0	Tim 17300	T21M	495	2RI	Ros	9x3 $\frac{1}{2}$ x $\frac{1}{2}$	C	168 $\frac{1}{2}$	105 $\frac{1}{2}$	37	44x3	34x3 $\frac{1}{2}$	N	40			
40	Per	D.B.-L	B-L 55	A	U	7	No	Spl	Tim 66704D H	WF																		

Line Number	Make, Model and Capacity	General		Tire Size		Engine										Fuel System		Electrical System		Line Number							
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings		Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
5½ Ton and More—Cont'd																											
1	Schacht 60 6 Ton	205 217	22600	8600 P 38x7	DF38x7	Wau SRL	6-4½x5½	462	45.9	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	1						
2	Schacht 65 6 Ton	160 198	24400	9000 S 36x5	S36x12	Wau SRL	6-4½x5½	462	45.9	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	2						
3	Schacht 70 7½ Ton	168 200	30500	10500 S 36x7	DS 40x8	Wau SRL	6-4½x5½	462	45.9	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	3						
4	Selden 77	170 220	11800	P 36x8	DS36x8	Con 16H	6-4½x5½	462	51.1	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	4						
5	Service 100ZB	5830	175	9000 S 36x5	S 40x14	Bud BA6	6-4½x5½	411	40.8	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	5						
6	Standard 5-7	165 180	8700	S 36x6	S 40x14	Con B5	6-4½x5½	462	36.1	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	6						
7	Sterling DW20-64SRL	174 192	27000	9765 S 36x6	S 40x14	Wau 6SRL	6-4½x5½	462	46.0	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	7						
8	Sterling EW27-64SRL	166 180	27000	7730 S 36x5	S40x12	Wau 6SRL	6-4½x5½	462	46.0	88-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	8						
9	Sterling DC27-64H.B.	174 188	27000	7825 S 36x6	S40x12	Wau 6HB	6-4½x5½	489	43.3	90-1900	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	9						
10	Sterling EC29-66AB	182 200	29000	10380 S 36x6	S 40x14	Wau 6AB	6-4½x5½	549	48.6	98-1850	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	10						
11	Sterling EC35-66AB	182 200	35000	10930 S 36x6	S 40x14	Wau 6AB	6-4½x5½	549	48.6	98-1850	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	11						
12	Stewart 27X 6-7 Ton	5700	165 235	26677	P 36x7	Wau 6SRL	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	12						
13	Walter FHR 7½ T	5700	Op	136	24000	Op	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	13						
14	Ward La France 50D-7	5700	Op	136	24000	Op	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	14						
15	Ward La France 70C-7	5550	Op	136	24000	Op	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	15						
16	Ward La France 78B	6300	Op	136	24000	Op	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	16						
17	White 52 7½ T	5100	174 245	28000	9409 S 36x6	S 40x12	Wau 6SRL	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	17					
18	White 59A 7½ T	6000	155 244	28000	9775 P 40x8	S 40x14	Wau 6SRL	6-4½x5½	462	45.9	100-2000	L	G	B 3	7	FP	Mo	Zen	G	L-N	L-N	18					
19	Witt-Will R55	5700	159	27000	9500 P 38x9	DP38x9	6-4½x5½	427.5	45.9	100-2000	H	C	N 2½	7	FP	Mo	Zen	G	L-N	L-N	19						
Six-Wheelers																											
21	Autocar G 10T	9000	171 238	36000	13000 P 36x8	DP36x8	6-4½x5½	453.0	48.6	101-2400	L	G	C 3	14½	7	FP	Ha	Pe	R-Bo	L-N	21						
22	Brockway 640	212 224	40000	14000 P 38x7	S 36x10	Con 36B	6-4½x5½	611.4	54.2	116-1800	L	G	C 3	13½	7	FP	Ha	Pe	R-Bo	L-N	22						
23	Diamond T 901 4T	4140	189 219	21000	8300 P 36x8	P 36x8	6-4½x5½	428.4	45.9	94-2200	L	G	C 3r	15	7	FP	Ha	Pe	R-Bo	L-N	23						
24	Diamond T 1600 5T	6220	173 210	36000	11700 P 36x8	DP36x8	6-4½x5½	479.0	51.3	106-2200	L	G	C 3	15	7	FP	Ha	Pe	R-Bo	L-N	24						
25	Diamond 2500 10-12T	8000	194 214	42000	13000 P 36x7	S 36x12	Wau 6R	6-5x5½	675.0	60.0	126-1800	L	G	C 3½	15	7	FP	Ha	Pe	R-Bo	L-N	25					
26	Douglas P66 5T	7900	210	36000	10000 P 36x8	DP36x8	6-4½x6	572.5	48.6	114-1900	L	G	C 3½	10½	7	FP	Ha	Pe	R-Bo	L-N	26						
27	Fageol 4-66 4T	22500	11280	P 36x6	DP36x6	Wau SRL	6-4½x5½	462.0	45.9	89-2200	L	G	A 3½	13½	7	FP	Ha	Pe	R-Bo	L-N	27						
28	Fageol 6-66 6T	26500	11280	P 36x6	DP36x6	Wau SRL	6-4½x5½	462.0	45.9	89-2200	L	G	A 3½	13½	7	FP	Ha	Pe	R-Bo	L-N	28						
29	Fageol 8-66 8T	36200	12870	P 36x6	DP36x6	Wau SRL	6-4½x5½	549.0	48.6	100-2000	L	G	A 3½	13½	7	FP	Ha	Pe	R-Bo	L-N	29						
30	Fageol 10-66C 10T	36200	13700	P 36x6	DP36x6	Wau SRL	6-4½x5½	549.0	48.6	100-2000	L	G	A 3½	13½	7	FP	Ha	Pe	R-Bo	L-N	30						
31	FDW X6 6T	170	24000	9500 P 36x8	DP36x8	Wau	6-4½x5½	404.0	43.3	87-2500	L	G	C 3	13½	7	FP	Ha	Pe	R-Bo	L-N	31						
32	Gen. Motors T90-9001	5885	185 220	23000	9400 B 7.50/20	DB7.50/20	6-3x5½	331.4	33.7	94-2500	H	G	C 2½	8½	4	PC	Ha	Mar	M-D-R	D-R	32						
33	Gen. Motors 9003 12-15	6055	185	50000	9775 P 34x7	DP34x7	6-3x5½	331.4	33.7	94-2500	H	G	C 2½	8½	4	PC	Ha	Mar	M-D-R	D-R	33						
34	Hug 98 8-10 Ton	34000	Op	31765	P 40x8	DP40x8	6-4½x5½	411.0	40.8	83-2100	L	G	C 3	10½	7	FP	Ha	Pe	R-Bo	L-N	34						
35	Indiana 640	212 224	40000	14000 P 38x7	S 36x12	Con 36B	6-4½x5½	611.4	54.2	116-1800	L	G	C 3	13½	7	FP	Ha	Pe	R-Bo	L-N	35						
36	Kenworth 345	8600	245 245	34500	11500 P 36x8	DP36x8	6-4½x5½	468.0	43.3	116-1800	L	C	A 2½	10½	4	PC	Ha	Pe	R-Bo	L-N	36						
37	Kenworth 385	242	38500	12800 P 38x9	DP38x9	Has 175	6-5x6	706.8	60.0	150-2000	H	C	A 2½	11½	7	FP	Ha	Pe	R-Bo	L-N	37						
38	Kleiber 22DD 5T	5000	181 222	24000	9200 P 36x8	DP32x6	Con 18R	6-4½x5½	339.3	38.4	82-2400	H	G	C 2	9½	7	FP	Ha	Pe	R-Bo	L-N	38					
39	Mack 126 6T	7500	24000	9200 P 36x8	P 36x8	Bud BA6	6-4½x5½	411.0	40.8	78-2250	L	G	C 2½	9½	4	PC	Ha	Pe	R-Bo	L-N	39						
40	Mack AC 10T	7500	24000	9200 P 36x8	S 40x12	Own AC	6-5x6	40.0	40.0	78-2250	L	G	C 2½	9½	4	PC	Ha	Pe	R-Bo	L-N	40						
41	Mack AP 10T	7500	24000	9200 P 36x8	S 40x12	Own AP	6-5x6	40.0	40.0	78-2250	L	G	C 2½	9½	4	PC	Ha	Pe	R-Bo	L-N	41						
42	Moreland ED7	5285	196	23000	8500 P 36x8	P 36x8	6-4½x5½	360.8	40.8	73-2000	L	G	C 2½	13½	7	FP	Ha	Pe	R-Bo	L-N	42						
43	Moreland HD7	5285	220	30000	10500 B 9.00/20	DB9.00/20	6-4½x5½	478.8	51.2	105-2200	L	G	C 3	15	7	FP	Ha	Pe	R-Bo	L-N	43						
44	Moreland TD7	8245	221	34000	11500 P 36x7	S 36x10	Her YXC3	6-4½x5½	478.8	51.2	105-2200	L	G	C 3	15	7	FP	Ha	Pe	R-Bo	L-N	44					
45	Relay 50SW 5T	5505	152 178	8600 P 36x6	DP36x6	Con 16H	6-3x5½	331.3	33.7	94-2500	H	G	C 2½	8½	4	PC	Ha	Mar	M-D-R	D-R	45						
46	Relay 60SW 7T	6545	175 205	12000 P 38x7	DP40x8	Bud BA6	6-4½x5½	411.0	40.8	78-2250	L	G	C 2½	9½	4	PC	Ha	Pe	R-Bo	L-N	46						
47	Whitcomb 3T	6000	Op	12000	P 36x8	Wis Z	6-4½x5½	477.0	48.6	103-2200	H	C	2½	4	FP	Ha	Pe	R-Bo	L-N	47							
48	Whitcomb 5T	7200	Op	17000	P 38x9	Wis Z	6-4½x5½	477.0	48.6	103-2200	H	C	2½	4	FP	Ha	Pe	R-Bo	L-N	48							
Gasoline Tractor-Trucks																											
51	Amer. LaFrance 5 T	3950	131 131	6400 S 36x5	S 36x10	Own 2R	4-4½x6	28.9	28.9	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	51						
52	Amer. LaFrance 7 T	4950	133 133	8400 S 36x6	DS36x6	Own 3R	4-4½x6	28.9	28.9	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	52						
53	Amer. LaFrance 10 T	5500	133 133	9400 S 36x6	DS40x6	Own 5R	4-4½x6	36.1	36.1	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	53						
54	Amer. LaFrance 13 T	7500	133 133	9500 S 36x7	DS40x7	Own 5R	4-4½x6	36.1	36.1	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	54						
55	Amer. LaFrance 15 T	6000	133 133	9700 S 36x7	DS40x8	Own 5R	4-4½x6	36.1	36.1	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	55						
56	Armleder 30	115	4100	S 34x6	Her OX	4-4x5	25.6	25.6	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	56							
57	Armleder 50	116	5100	S 36x8	Bud EBU-I	4-4½x5½	28.9	28.9	45-1450	L	G	C 2	8	2SP	Ph	Ha	Mar	M-D-R	D-R	57							

KEY OF REFERENCES

GENERAL

Gross Vehicle Weight—Chassis weight, plus body and cab, plus pay load.
Chassis Price is for truck with standard wheelbase listed and with tires listed F.O.B. factory, unless otherwise specified.

TIRES

B—Balloons
DB—Dual Balloons standard equipment.
P—High Pressure Pneumatics standard equipment.
DP—Dual High Pressure Pneumatics standard equipment.
S—Solids.
DS—Dual Solids.
°—Pneumatics furnished at extra cost.

ENGINE

Make

Bud—Buda Company.
Con—Continental Motors Corp.
Has—American Car & Fdy. Co.
Her—Hercules Motor Corp.
Lye—Lycoming Motor Corp.
Wau—Waukesha Motor Co.
Wis—Wisconsin Motor Mfg. Co.

Valve Arrangement

H—In head.
L—"L"—Head.
S—Sleeve.
T—"T"—Head.

Camshaft Drive

C—Chain.
G—Gear.

Piston Material

A—Aluminum alloy.
B—Semi-steel.
C—Cast iron.
N—Nickel iron.
S—Aluminum alloy with strut

Oiling System

CC—Pressure to main, connecting rod and camshaft bearings.
FP—Pressure to main, connecting rod, camshaft bearings and piston pins.
PC—Pressure to mains and connecting rod bearings.
PG—Pump, gravity and splash.
PS—Pressure with splash.
SP—Circulating with splash

Governor

Bf—Bethlehem Fabricators, Inc.
Bu—Buda
Co—Continental.
Ha—Handy Governor Co.
HS—Amer. Car & Fdy. Co.
KP—Handy Governor Co.
Mo—Monarch.
No—Not supplied.
On—Own
Op—Optional.
Pe—Pierce Governor Co.
Si—Simplex (Elsemann Magneto Corp.)
St—Sterling.
Wa—Waukesha.

Radiator

Bu—Bush Mfg. Co.
Chi—Chicago Mfg. Co.
Fed—Fedders Mfg. Co.
G&O—G & O Mfg. Co.
Har—Harrison Rad. Corp.
Hex—Hexcel Rad. Co.
Lon—Long Mfg. Company.
McC—McCord Rad. & Mfg. Co.
Mod—Modine Mfg. Co.
Per—Perfex Corp.
R-T—Rome-Turney Rad. Co.
You—Young Rad. Company.

FUEL SYSTEM
Carburetor Make

Car—Carter Carburetor Co.
John—Johnson.
Mar—Marvel Carburetor Co.
Sch—Wheeler Schebler Co.
Ste—Detroit Lubricator.
Str—Stromberg Motor Dev. Co.
Tit—Tillotson Mfg. Co.
Zen—Zenith-Detroit Corp.

Fuel Feed

E—Electric Pump.
G—Gravity.
M—Mechanical Pump.
P—Pressure.
V—Vacuum.

ELECTRICAL SYSTEMS
Ignition System, Generator and Starter Make

A-Bo—Amer. Bosch Magneto Co.
R-Bo—Robert Bosch Magneto Co.
Apo—Apollo Magneto Corp.
D-R—Delco Remy Company.
Eis—Elsemann Magneto Corp.
L-N—Leece-Neville Co.
N-E—North East Elec. Co.
Spl—Splittorf Electrical Co.
I—Generator and Starter at extra cost.
2—Starter not supplied. Generator at extra cost.
3—Starter at extra cost.

CLUTCH

Type and Make

D—Multiple disk.
dp—Double Plate.
O—Plate in oil.
P—Single plate.

Make

B&B—Borg & Beck Co.
B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
H-S—Merchant & Evans Co.
Lon—Long Mfg. Company.
M-E—Merchant & Evans.
M.M.—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
Roc—Rockford Drill Machine Co.
W-G—Warner Gear Co.

GEARSET

Make and Model

B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
M.M.—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
W-G—Warner Gear Co.
War—Warner Corp.

Location

A—Amidships.
J—Unit with jackshaft.
U—Unit with engine.

Auxiliary, Location and Number of Speeds

No—Not furnished.
Op—Optional at extra cost.
A—Amidships.
R—Rear of amidships main transmission.
U—Unit with engine.

UNIVERSAL JOINTS

Blo—Blood Bros. Mach. Co.
B-C—Blood and Cleveland.
Cle—Cleveland Steel Prod. Corp.
Har—Spicer Mfg. Co.
M.M.—Mechanics Machine Co.
PeS—Peters and Spicer.
Pet—Peters.
P-S—Peters and Sneed.
S-C—Spicer and Cleveland.
Spi—Spicer Mfg. Co.
S-P—Superior Universal Products Co.
SpB—Spicer and Blood Bros.
SpP—Spicer and Pick.
S-T—Spicer & Thermoid.
U-M—Universal Machine Co.
U-P—Universal Products Co.

REAR AXLE

Make

Cla—Clark Equip. Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
Eat—Eaton Axle Co.
Sal—Salisbury Axle Co.
Tim—Timken Det. Axle Co.
Wis—Wisconsin Axle Co.

Final Drive and Type

B—Bevel.
C—Chain.
D—Dead.
I—Internal Gear.
2—Double Reduction.
S—Spiral Bevel.
W—Worm.
 $\frac{1}{2}$ —Semi-Floating.
 $\frac{3}{4}$ —Three-Quarter Floating.
F—Full Floating.

Drive and Torque

H—Hotchkiss.
R—Radius Rods.
T—Torque Arm.
U—Torque Tube.
O—Radius Rods Optional.

WHEELS DRIVEN

2—Forward pair of rear wheels.
4F—Front wheels and forward pair of rear wheels.
4R—Four rear wheels.
6—Six wheels.

FRONT AXLE

Make and Model

Shu—Shuler Axle Co., Inc.
Cla—Clark Equipment Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
Eat—Eaton Axle Co.
Sal—Salisbury Axle Co.
She—Sheldon.
Tim—Timken Det. Axle Co.
Wis—Wisconsin Axle Co.

BRAKES

Service Make

B—Bendix.
BE—Bendix front, Eaton rear.
BO—Bendix front, Own rear.
C—Columbia.
K—Clark.
L—Lockheed.
LO—Lockheed front, Own rear.
O—Own.
OE—Own front, Eaton rear.
OW—Own front, Wisconsin rear.
S—Steeldraulic.
T—Timken.
W—Wisconsin.

Location

2—Two Wheel
4—Four Wheel.
6—Six Wheel.
2/4—Two wheel brakes effective on all four wheels through driveshaft.
F—Driveshaft.
J—Jackshaft.
P—Propeller shaft.
P/4—Propeller shaft effective on four wheels.
r—Four rear wheels.

Type

I—Internal.
Y—Internal front and external rear.
X—External.

Method of Operation

A—Air.
D—Hydraulic and mechanical.
H—Hydraulic.
M—Mechanical.
V—Vacuum.

Hand Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
R—Worm or bevel gear shaft.
T—Transmission.
F—Driveshaft.

Type

D—Disk.
I—Internal.
X—External.
Y—Internal front and external rear

STEERING GEAR

Make

CAS—Columbus G. & P. Co.
Gem—Gemmer Mfg. Co.
Han—Hannum Mfg. Co.
Jac—Saginaw Steering Gear Div. General Motors Corp.
Lav—Hannum Mfg. Co.
Ros—Ross Gear & Tool Co.
Woh—Wohlrab Gear Co.

FRAME

Dimensions Side Rail Depth, Width of Flange, Thickness of Stock

Type

C—Channel.
I—"I" Beam.
P—Channel reinforced with plate.
T—Side rails tapered front and rear.

SPRINGS

Auxiliary Type

$\frac{1}{2}$ —Semi-elliptic above or below main springs.
 $\frac{3}{4}$ —Quarter elliptic.
C—Coil spring.

a General Motors Truck Models shown are basic chassis in the ton-range classifications as advertised. Each model is available in a number of wheelbases and tire types (tire combinations—each type carrying a recommended gross weight) and priced accordingly. Gross vehicle weight indicated for each chassis in table is the recommended gross weight for type number specified without exceeding rated capacity of tires. The tire size does not affect the Straight Rating for which chassis is guaranteed and each Model is designed to operate satisfactorily under average conditions with loads giving a total gross weight (chassis, body, equipment and payload) equal to Straight Rating given below. Type numbers, Straight Rating and Payload Range, assuming nominal body allowance, for each model follow:

MODEL	STRAIGHT RATING	TYPE NUMBERS	RANGE OF PAYLOAD (TONS)
T-11	3800 lbs.	1001	$\frac{1}{2}$
T-15	5400 lbs.	1501 to 1503	$\frac{3}{4}$
T-17	6500 lbs.	1701 to 1708	$\frac{1}{2}$ to $1\frac{1}{4}$
T-19	8500 lbs.	2201 to 2218	1 to 2
T-25	8500 lbs.	2501 to 2513	1 to $1\frac{1}{4}$
T-30	11000 lbs.	3201 to 3214	$1\frac{1}{2}$ to $2\frac{1}{2}$
T-42	14000 lbs.	4201 to 4212	2 to $3\frac{1}{2}$
T-44	15000 lbs.	4401 to 4412	2 to 4
T-60	18500 lbs.	6201 to 6218	$2\frac{1}{2}$ to $4\frac{1}{2}$
T-82	22000 lbs.	8201 to 8212	3 to 6
T-90	28000 lbs.	9001 to 9007	5 to $7\frac{1}{2}$



LEE of Conshohocken Tires

TRUCK and BUS BALLOONS

A truck is no more efficient than its tires. LEE twin bead truck and bus balloons, illustrated above, are recommended for high-speed long-distance operations over all kinds of roads. Expert selection of materials, excellence of design, long experience in manufacturing, close inspection and extensive testing, account for the rapidly growing popularity of LEE DeLuxe Cord Truck and Bus Tires.



LEE of Conshohocken Tires

DUMP TRUCK PNEUMATICS

Dump trucks do the roughest, toughest of all truck work. Overloads, excessive strains, poorest traction, highest speeds—and what not? They are called upon to perform under possibly the most difficult and exacting of all truck operating conditions. No wonder a special dump truck tire is necessary! No wonder LEE design, experience, workmanship and careful selection of materials produced the DeLuxe tire in this field.



LEE *of* Conshohocken Tires

Gradually, but surely, motor haulage has become an economic necessity. Capacity loads on hard surfaced roads, interurban routes with time scheduled deliveries, are possible only if the tires stand up. LEE high pressure tires, illustrated above, are more than equal to the demand made of them in this service. They are typical of the LEE DeLuxe Cord Truck and Bus line.

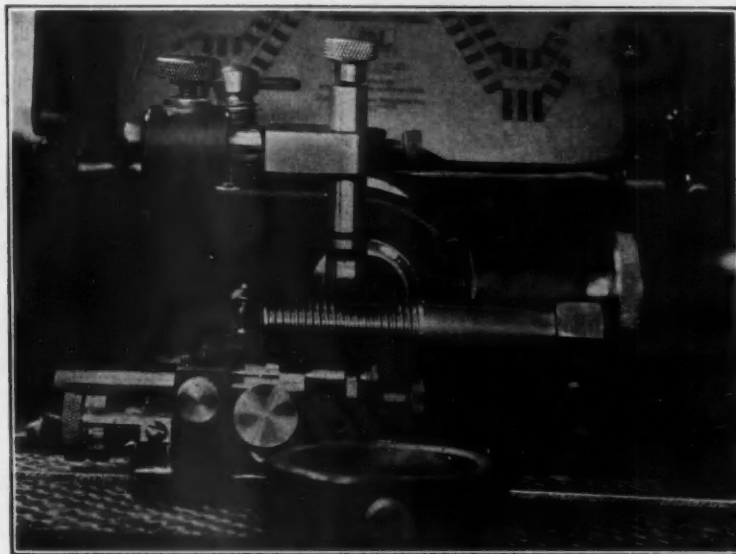


C-76

LEE Conshohocken Tires

STAGHOUND (REPUBLIC) SOLIDS

Recognized for years by large operators of trucks as highly dependable. Unsurpassed for traction, satisfactory riding qualities and long, uninterrupted service. Staghound tread marks have been impressed upon all the commercial roadways of the world. The Staghound (Republic) line of solids and solid-pneumatics embraces a complete series of tires for all commercial uses. Staghounds cushion the road as well as the load.

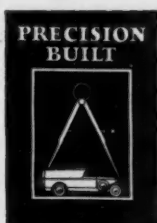


The Most Intimate Questions About Autocar Trucks Can Be Answered Truthfully

Comparatively simple is the part a bolt plays in the operation of a motor truck. Yet before one is accepted for use in an Autocar chassis, it must pass the strict scrutiny of the Hartness Screw Thread Comparator which accurately compares its pitch, diameter, lead and form with a perfect master thread.

The Autocar truck is built with such precision that even the nuts and bolts which hold it together are subjected to rigid tests in delicate machines before they are accepted for use in Autocar chasses.

The experienced motor truck user knows that when precision methods are as thoroughly followed as they are in Autocar trucks, they reflect themselves doubly in smooth performance, long, useful life, and low maintenance and operation costs. He knows that precision-building is worth many times the small amount it adds to the cost of the finished product.



AUTOCAR TRUCKS

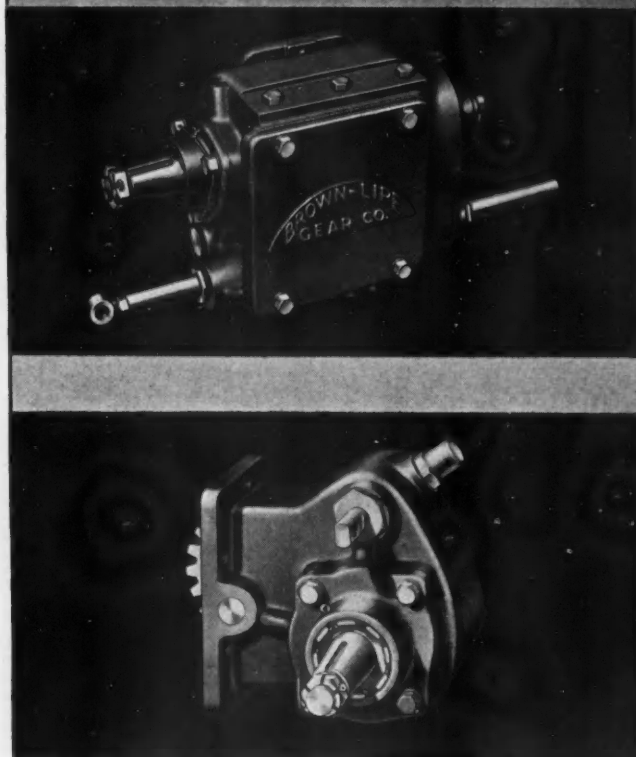
THE AUTOCAR COMPANY, ARDMORE, PA.



BROWN-LIPE
GEAR CO.

LIPE

Brown-Lipe take-offs are standard throughout the industry for some eighty different purposes. Truck and tractor manufacturers are furnishing their products so Brown-Lipe Power Take-Offs can be fitted. This general acceptance of one product throughout an entire field could have been possible only with a product of such proven quality as Brown-Lipe Power Take-Offs.



ASSOCIATED *Spicer* COMPANIES

BROWN-LIPE
CLUTCHES and
TRANSMISSIONS

BROWN-LIPE GEAR CO.
SYRACUSE NEW YORK

July, 1930

SALISBURY
FRONT and REAR
AXLES

SPICER MFG. CORP.
TOLEDO OHIO.

SPICER
UNIVERSAL
JOINTS

PARISH
FRAMES and
STAMPINGS

PARISH PRESSED STEEL CO.
READING PENNA.

*The Commercial Car Journal
and Operation & Maintenance*

Rolling up **MORE PROOF** that *it LICKS the TOUGH TIRE PROBLEM!*



The complete line of Truck-Balloons—including 24-inch wheel sizes. Now you can change-over to balloons without changing wheels!

No matter what the type of service or the cause of previous tire failure, the General Jumbo Truck-Balloon is the logical answer. Here, taken at random, are operators' actual performance records more convincing than anything we could say:

ON THE SAME JOB

Before

changing-over from Former Equipment

TEXAS. Oil field trucks and trailers. Formerly on 36 x 8 and 40 x 10 high pressures. Averaged only 7,000 miles, necessary to limit load to 12,000 — 14,000 lbs.

MICHIGAN. Heavy loads at high speeds. Formerly on high pressures with blow-outs the rule at 8,000 miles or less.

NEW JERSEY. 5 trucks on long, fast round trip hauls to Connecticut. Formerly on 40x8 high pressures.

LONG ISLAND. Sand and gravel service. Truck formerly on solids with a very high tire and maintenance cost.

MISSOURI. Bakery fleet of 25 trucks, previously on high pressures. Majority of trucks average about 170 miles daily over hilly country roads with many curves and flint rock roadbed.

NEW YORK. Furniture manufacturer. Heavy load, fast runs. High pressures averaged only 5,000 miles and operator sustained heavy loss on damaged furniture.

MISSOURI. Milk truck, making 75-mile trip each day. High pressures lasted only 8,000 miles with excessive tire delays.

After

changing-over to the **GENERAL JUMBO Truck Balloon**

Now uses forty 9.75/20 General Balloons on 4 jobs. Mileage so far over 14,000 and only one flat to date. Load limit has been raised to as high as 25,000 lbs., with average 16,000 to 18,000 lbs. All tires still in excellent condition!

With 9.75/20 and 9.75/24 Jumbo Balloons operator has already tripled his mileage and is changing over fleet of 4 trucks!

Entire fleet changed over to 9.75/24 General Balloons. Has not had an hour's delay chargeable to rubber, 35% decrease in operating cost and tires still look new after 16,000 miles!

With Jumbo Balloons operator figures \$150 to \$200 per year saving on wheels and rear end trouble. Says traction increased 50% and is changing over entire fleet!

Tire cost per mile has been reduced from .031 to .0139! Savings with Jumbo Balloons has caused them to change-over entire fleet!

General balloons have gone 15,000 miles so far without any interruptions and are in excellent condition. Saves 12 gallons of gas and 1 hour's running time on round trip to Philadelphia. Load breakage loss completely eliminated!

Jumbo Balloons have already exceeded mileage of any former high pressures with no expense and show only slight wear. Trip time cut from 7-9 hours to 4 hours!

These are only a few out of the thousands that have changed-over. Everywhere the results have been the same. Learn from your General Tire Dealer today how easy it is for you to make the change-over. The General Tire and Rubber Co., Akron, Ohio.

The **GENERAL** *Jumbo Truck-Balloon*

—goes a long way to make friends



We make a style and size of drill, grinder, or buffer for every type of work. Prices start at \$24.00.

IS 1930 REWARDING YOU?

Make your Shop Make Money!

Running a fleet of trucks or buses is a business for hard-boiled men. If you indulge in many theories or fads you go broke. No matter how much you keep your head level and your thoughts straight, a net profit is a slippery proposition. The money comes in at a snail's pace and goes out like a whirlwind.

Knowing those things, we have never said anything that we couldn't prove. And we are never going to say anything we can't prove. You don't want guesses, you want FACTS, and that is exactly what we want to give you.

Time after time we have urged you to take advantage of the cost-cutting value of U. S. electrically-driven tools. Here we are, urging you again—for your sake as well as ours. And we stand ready to PROVE that 1930 has rewarded every fleet owner who has followed our advice. IS 1930 REWARDING YOU?



This booklet outlines how to make the shop make money. There's a lot of stuff in it that you KNOW—and a lot that you may have overlooked. Your copy is free.

UNITED STATES ELECTRICAL TOOL CO.

CINCINNATI, OHIO, 2455 W. Sixth St., and Branches in — Atlanta — Boston — Chicago — Cleveland — Dallas — Denver — Detroit — London — Los Angeles — Minneapolis — New York —

Philadelphia — Pittsburgh — St. Louis — San Francisco — Seattle — Syracuse

EXPORT REPRESENTATIVES: Westinghouse International Co., 150 Broadway, New York

CANADIAN DIVISION: Maple Leaf Electric Tools, Ltd., Toronto



New WHITE Sixes set new performance standards

In the new, six-cylinder, heavy duty, Models 63 and 64 White again demonstrates its ability to maintain and increase its leadership in every field of motor transportation.

The Models 63 and 64 are rugged, oversize and White built throughout. They are designed for both city and inter-city hauling with extra power for steep grades and rough going, and higher average speeds and quick acceleration in heavy city traffic.

Where the margin of profit depends on faster schedules, regularity and low operating and maintenance cost over a long period of years, the new White Models 63 and 64 assure the operator the maximum return on his truck investment.

They are particularly adaptable for dump truck use and will outperform all other trucks of their capacity—no matter what the type of service. Various types of bodies are available.

Special Mechanical Features:

MODEL 63

ENGINE—Six cylinder, dual ignition, machined combustion chambers, overhead valves. Seven-bearing crankshaft. Aluminum alloy pistons.
TRANSMISSION—Selective type, four speeds.
REAR AXLE—Heavy, single reduction, full floating.
FRAME—Pressed steel, heat treated.
4-WHEEL BRAKES—Hydraulic internal expanding, power assisted. Air brakes optional at extra cost.
ELECTRICAL SYSTEM—Two - unit, 12-volt starting and lighting.

MODEL 64

ENGINE—Six cylinder, 100 H. P., dual ignition, machined combustion chambers, overhead valves. Seven-bearing crankshaft. Aluminum alloy pistons.
TRANSMISSION—Selective type, four speeds.
REAR AXLE—Heavy, double reduction, full floating.
BRAKES—Rear wheel, air operated. Four-wheel air brakes optional at extra cost.
FRAME—Pressed steel, heat treated and heavily reinforced.
ELECTRICAL SYSTEM—Two - unit, 12-volt starting and lighting.

THE WHITE COMPANY, CLEVELAND

WHITE

A COMPLETE LINE OF FOUR AND SIX CYLINDER
TRUCKS
BUSSES

In 1930 General Magazine
Advertising...for passenger cars

REO

Nickel Cast Iron

January 11, 1930

THE SATURDAY EVENING POST

Why REO
GOOD for 100,000 miles

Reo is happy to note this trend on the part of the public. Reo has never neglected style, but Reo has never, in the 26 years of its history, built to a price. In the very beginning, Reo set for itself one rigid standard—from which Reo has never wavered. That standard is to make Reo good for 100,000 miles—to make a car you will enjoy driving and be proud to drive for a full 100,000 miles.

RICHARD H. SCOTT,
PRESIDENT
REO MOTOR CAR COMPANY

Each Reo part is built to withstand a strain 100% greater than you will ever put it to, will ever undergo in actual service.

By spending from 10% to 25% more for parts, Reo provides its owner 100% longer life. Its engineering policy is to make that additional expense pay for itself.

Reo's axles are so sturdy—Reo springs so strong they can withstand a shock equivalent to that of a four-foot drop at 60 miles an hour. Reo uses only "live" metal in its malleable castings—no scrap metal is tolerated.

Reo's 7-bearing crankshaft, flywheel, clutch drum—even Reo's fan blades—are balanced.

A chrome-nickel cylinder block with seven times the endurance of the ordinary iron block, immensely reducing valve seat wear and the need of valve grinding and valve tappet adjustment.

(From The Saturday Evening Post—January 11, 1930)



The car illustrated above is the REO FLYING CLOUD... MODEL 20... SPORT COUPE... Reo prices range from \$1195 to \$1770, f.o.b. Lansing, Michigan.

REO MOTOR CAR COMPANY
Lansing, Michigan

REO FLYING CLOUD
GOOD
for 100,000 miles

This is a reproduction of one page of the double-page advertisement in The Saturday Evening Post which featured the Chrome-Nickel Iron cylinder blocks in Reo Flying Cloud models.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

features . . .

Cylinder Blocks

"GOOD for 100,000 miles"

AGAIN, the Reo Motor Car Company features Nickel Iron...Reo is the *first* manufacturer of passenger automobiles to feature a Chrome-Nickel Iron engine block in national magazine advertising!

Previously, Reo "Speedwagon" advertising in The Saturday Evening Post, described Nickel-Chrome alloy iron as "the longest-wearing cylinder material known today." Now...in 1930 general magazine advertising for Flying Cloud models, Reo states: "A Chrome-Nickel cylinder block with seven times the endurance of the ordinary iron block".

More and more, leading manufac-

turers of quality products, and the general public as well, appreciate the far-reaching significance of standardizing on such improved materials as Chrome-Nickel Cast Iron. Uniformly high hardness...freedom from hard spots...finer grain...greater toughness...these are the characteristics of Chrome-Nickel Cast Iron that make this modern material particularly suited to automotive cylinder castings.

Consequently, longer-wearing Nickel-Chrome Iron cylinder blocks are contributing toward the production of a Reo Flying Cloud that is "good for 100,000 miles".

Nickel

FOR CAST IRON



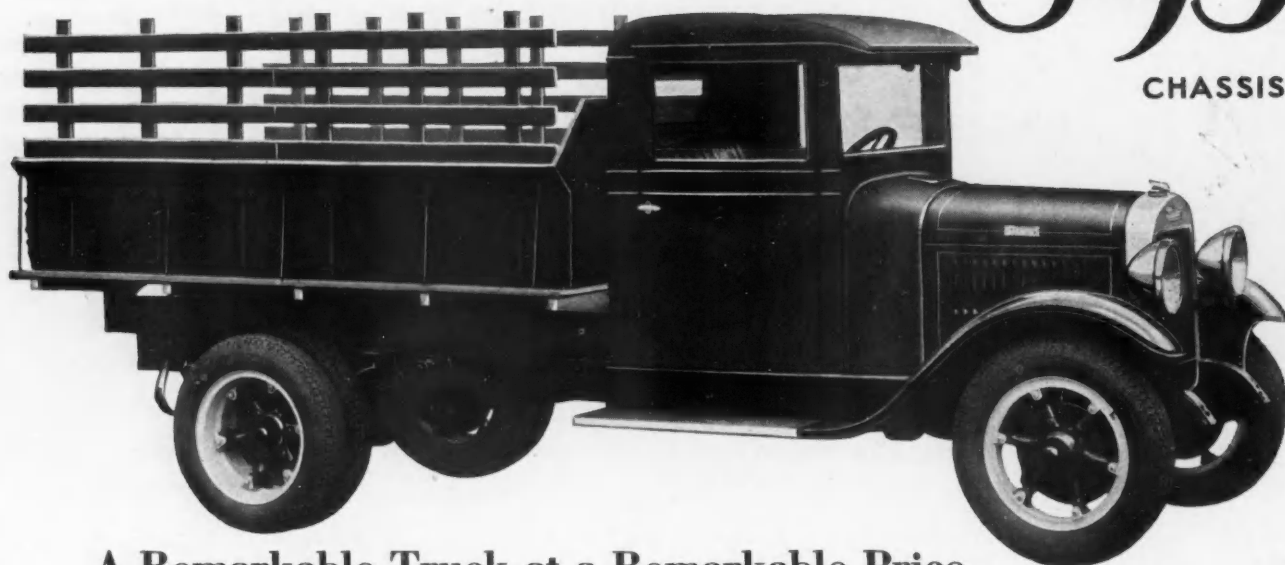
Our foundry specialists will gladly discuss your casting problems with you.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

The New Stewart 1½ Ton Truck

\$895

CHASSIS



A Remarkable Truck at a Remarkable Price

Another Stewart triumph! A new 1½ ton truck embodying a long list of mechanical features formerly found only on the finest trucks selling at a price that smashes all precedent. This new Stewart has a 7½ inch frame, 11 inch clutch, 4 speed transmission, dual-balloon tires and helper springs.

The same quality that has long marked Stewarts as "America's Greatest Truck Value" is found in this model. From radiator to tail light an honestly rated truck built by exclusive truck makers entirely of truck parts.

Truck users whose demands include speed, flexibility and long life at low operating costs may now enjoy Stewart quality at a hitherto unheard of price for 1½ ton capacity.

The new Stewart 1½ tonner is not a one-year truck. Stewart owners know by experience that the average life of a Stewart is 5 years or more. Ask the Stewart owners in your community the results they are getting. Complete detailed specifications will be sent upon request.

MODELS

Bevel Axle	Worm Axle
1 ton 4 Cylinder \$695	2 ton 6 Cylinder \$2290
1 ton 6 Cylinder \$795	2½ ton 6 Cylinder \$2690
1½ ton 4 Cylinder \$895	3 ton 6 Cylinder \$3290
1½ ton 6 Cylinder \$1195	3½ ton 6 Cylinder \$3690
1¾ ton 6 Cylinder \$1495	5 ton 6 Cylinder \$4990
2 ton 6 Cylinder \$1695	6-7 ton 6 Cylinder \$5700
2½ ton 6 Cylinder \$1990	

Bus Chassis Fire Apparatus
f. o. b. Buffalo

Stewart

MOTOR TRUCKS

STEWART MOTOR CORPORATION
BUFFALO, N. Y.

Export Branch: 1 Broadway (Dept. 3)
NEW YORK CITY, U. S. A.

Cables: Stewartruk New York.
Codes: Acme, Bentley.

SPECIFICATIONS

ENGINE—Four cylinder truck motor. 3¾" bore. 4½" stroke. Six cylinder motor at extra cost.
CARBURETOR—Latest Stromberg.
IGNITION—Delco-Remy—engine driven distributor.
GENERATOR—Delco-Remy—direct gear driven also Delco-Remy starter.
TRANSMISSION—4 speeds forward and one reverse. 11" clutch.
STEERING GEAR—Ross—cam and lever type.
FRAME—Pressed steel side rails 7½" deep.
REAR SPRINGS—50" long, 2½" wide, 11 leaves. Equipped with helper springs.
REAR AXLE—Truck type, full floating, heavy cast housing.
BRAKES—Four wheel Bendix.
WHEELS—Metal. Six spokes, demountable rims.
WHEELBASE—Standard wheelbase 130". 145" and 160" at extra cost.
TIRES—6.50—20 balloons, dual rear.

Stewart Trucks have won—By costing less to run

It's easy
to be
CERTAIN

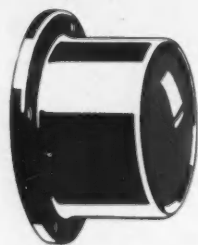
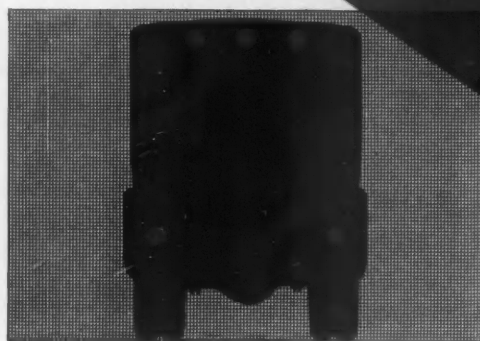
STANDARD of the WORLD

In Choosing
Piston Rings

QUALITY
BRAND PISTON RINGS

*Keep that
Youthful
Performance*

MORE OF THEM ARE USED FOR ORIGINAL EQUIPMENT THAN ANY OTHER MAKE



Bus or Truck Type. Red, green, amber or white lens, to conform with regulations in all states. List price \$1.25; in Canada, \$1.75.



Passenger Car Type. Ruby lens only; black enamel with chromium plated bezel. Easily attached. List price \$1.25; in Canada, \$1.75.

use Teltale

the Approved
REFLECTING Signal
on your Buses,
Trucks and
Trailers!

Safeguard your motor equipment with TELTALE, the efficient, foolproof, non-electric signal for buses, trucks and trailers! TELTALE locates your vehicles on the road at night by reflecting the lights of other cars approaching from the front or rear. More brilliant than an electric marker or tail-lamp at 300 feet. Clearly visible up to 1,400 feet! Always on the job—no wires or bulbs—lasts a lifetime—approved by highway departments everywhere!

Don't delay! Protect your equipment and your drivers, as well as others on the road, by installing this positive auxiliary signal that never burns out. TELTALE is distributed exclusively through United Motors Service, so write the nearest United Motors Branch for the address of your nearest source of supply.

UNITED MOTORS SERVICE

General Offices

INCORPORATED

Detroit, Michigan

Location of Control Branches

ATLANTA
BOSTON
BUFFALO
CHICAGO

CINCINNATI
CLEVELAND
DALLAS
DENVER

DES MOINES
DETROIT
INDIANAPOLIS
KANSAS CITY

LOS ANGELES
MEMPHIS
MILWAUKEE
MINNEAPOLIS

NEW ORLEANS
NEW YORK
OAKLAND
OMAHA

PHILADELPHIA
PITTSBURGH
RICHMOND
ST. LOUIS

SAN FRANCISCO
SEATTLE
TORONTO,
CANADA

DOES A GOOD TURN IN A TIGHT PLACE



Saves Time in Servicing Trucks

BBLACKHAWK "Chief" Box Wrenches lick the tough nuts that hide in cramped quarters, around corners, back in dark places, and cause your mechanics grief, barked knuckles, and wasted hours.

These lighter, slimmer tools glide over or under obstructions. Their keen broaching never slips or rounds nut corners. Finely balanced, easy swingers in small arcs. Bright as dollars—silvery chromium plated. Strong as crowbars—chrome-vanadium steel. Oval handle comfort.

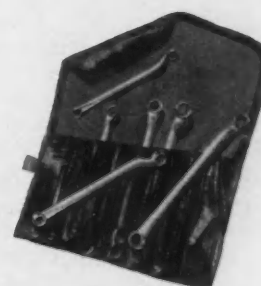
Wise truck dealers sell these Blackhawk lifetime beauties, in series and sets.

Mail the coupon

BLACKHAWK MFG. COMPANY
DEPT. CO MILWAUKEE, WIS.



Double Offset—Short
Different size double hex openings. Glittering chromium. Guaranteed. Set No. 2702 consists of 3 box type "Chiefs" in leatherette roll that fits the pocket, \$5.20 list.



Single Offset—Long
Same size double hex openings. Guaranteed not to tarnish or rust—glittering chromium. Set No. 2900 has 6 multi-useful tools in neat leatherette roll. \$14.60 list.

BLACKHAWK "CHIEF" BOX WRENCHES

Blackhawk Mfg. Co.,
Milwaukee

Send Box Type Wrench literature of interest to truck owners, operators, shop supts. and service men.

Firm.....

Individual.....

Address.....

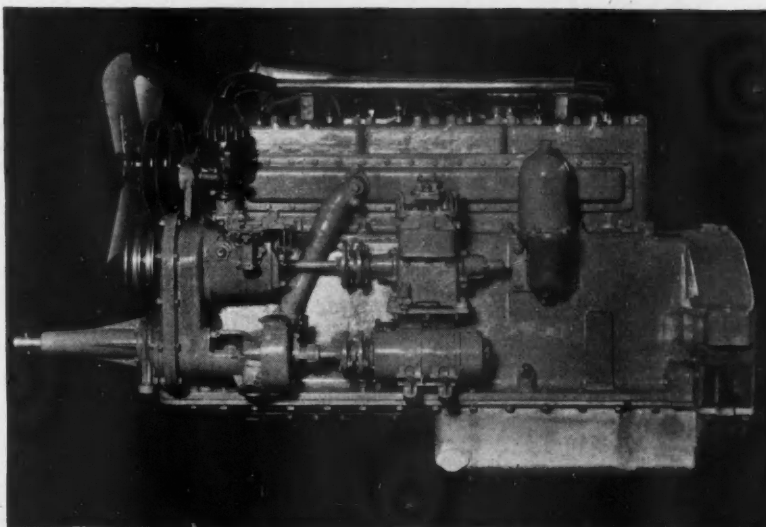
COLEMAN

FOUR WHEEL DRIVE

Knowles Brothers on their Utah Power & Construction contract at Cascade, Idaho, are encountering grades so steep that partially loaded rear drive trucks took them with difficulty. But with their Coleman F-200's powered with Sterling PETREL engines, they are hauling trailers over these same roads with unfaltering power.

In Coleman's matchless four wheel performance plus the extra powerful Sterling Petrel, Knowles Brothers have the sturdiest, most powerful truck obtainable. Having been Coleman users for years, they knew Coleman four wheel drive would meet their every requirement for power and stamina under these most unusual hauling conditions.

Altho the Coleman stands alone in performance on unusual transportation jobs, it will handle equally well the various types of transportation service usually sold by a truck dealer. You should have the Coleman franchise. Full details will be sent to interested dealers. Address your inquiry to either plant. Coleman Motors Corp., Main Plant, Littleton, Colo., Eastern Plant, Washington, D. C.



Powered by
**STERLING
PETREL**



They last a long, long time

**They will NOT burn,
glaze, soften, or swell**

American Brakebloks last longer—a whole lot longer! Tests by fleet owners, tests by maintenance men, tests by laboratories, and tests by over 40 manufacturers of trucks, buses, passenger cars and brakes, have proved that fact beyond any question of doubt. These tests have definitely established American Brakebloks as the most economical of all brake materials.

One reason for the remarkably long life of American Brakebloks is the fact they are heat resisting. They will not burn or smoke; they will not glaze; they will not swell; they will not soften and tear off the shoe—even under the highest braking temperatures.

The usual bonding agents employed in making brake linings (rubbers, asphaltums, phenol compounds, etc.) all melt or soften at comparatively low temperatures. But American Brakebloks are bonded by a new and different material which changes to a solid in the process of manufacture. It cannot be softened or volatilized by heat!

This is but one of the many revolutionary improvements provided by American Brakebloks. Combined, they offer to you lower braking costs and greater braking efficiency than you ever before enjoyed. A test will convince you!

... Also Because ...

1. American Brakebloks have the proper frictional qualities throughout their entire thickness. This assures smooth velvet stops throughout the life of the material.

2. They have no metallic content to cut or score drums.

3. They are non-compressible even at many times the highest braking

pressure. This assures a maximum braking area always, uniform wear at all points, and many less adjustments.

4. They will not swell or wedge, and therefore cannot wear off in spots.

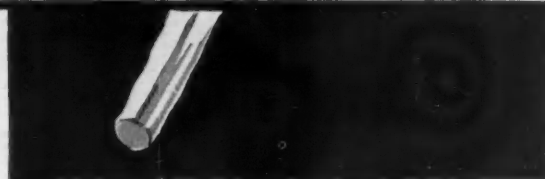
5. They recover quickly and completely from the effects of water, oil and grease.

American Brakebloks are made to fit every existing brake assembly. Write for name of nearest jobber and copy of "Braking Facts".

—American— BRAKEBLOKS

AMERICAN BRAKE MATERIALS CORPORATION

Industrial and Automotive Division American Brake Shoe & Foundry Co.
4660 Merritt Avenue • Detroit, Michigan, U. S. A.
Sales Offices: Chicago • New York • San Francisco
Export Department: 30 Water Street • New York City





AS GOOD AS GUNITITE?

FOR every type of product there must be a standard of comparison. Among brake drums it is the Gunitite Drum. Everywhere knowing men now ask of other brake drums "Are they as good as Gunitite?" Most fleet operators and maintenance men, further, demand Gunitite Drums as standard equipment on new additions to their fleet and carry out a regular plan of replacing old, worn drums with Gunitite Drums . . . refuse to take chances with old types or "just-as-good" drums.

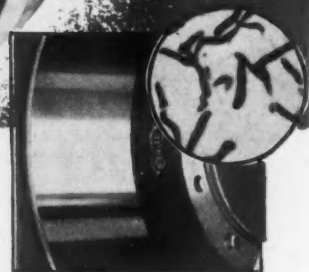
Gunitite Brake Drums set totally new standards for brake drum performance by giving more than 100,000 miles of service *without machining*. Where ordinary cast or pressed steel drums bend, score and groove within a short 20,000 miles, Gunitite Drums stay smooth as satin, never roughen, never bulge out of round . . . even at *five to ten times* that mileage!

Because of the very nature of Gunitite, brake drums cast of it cannot warp or distort under the hardest service. The graphite content of this new metal acts as a natural lubricant to keep the braking surfaces of the drum continuously *smooth* . . . for more than 100,000 miles! Before Gunitite Drums come to you they are carefully tested and drilled to *fit* your particular model of bus or truck. Every Gunitite Drum made is held to .009 of an inch concentricity . . . a roundness that makes brake adjustments easy to make and maintain.

Order a set of Gunitite Drums. Once you've used them you'll never go back to any other drum. The Gunitite catalog, listing every model of bus or truck, is sent free on request. Ask for a copy.

THE GUNITITE CORPORATION
Rockford, Illinois

GUNITITE BRAKE DRUMS

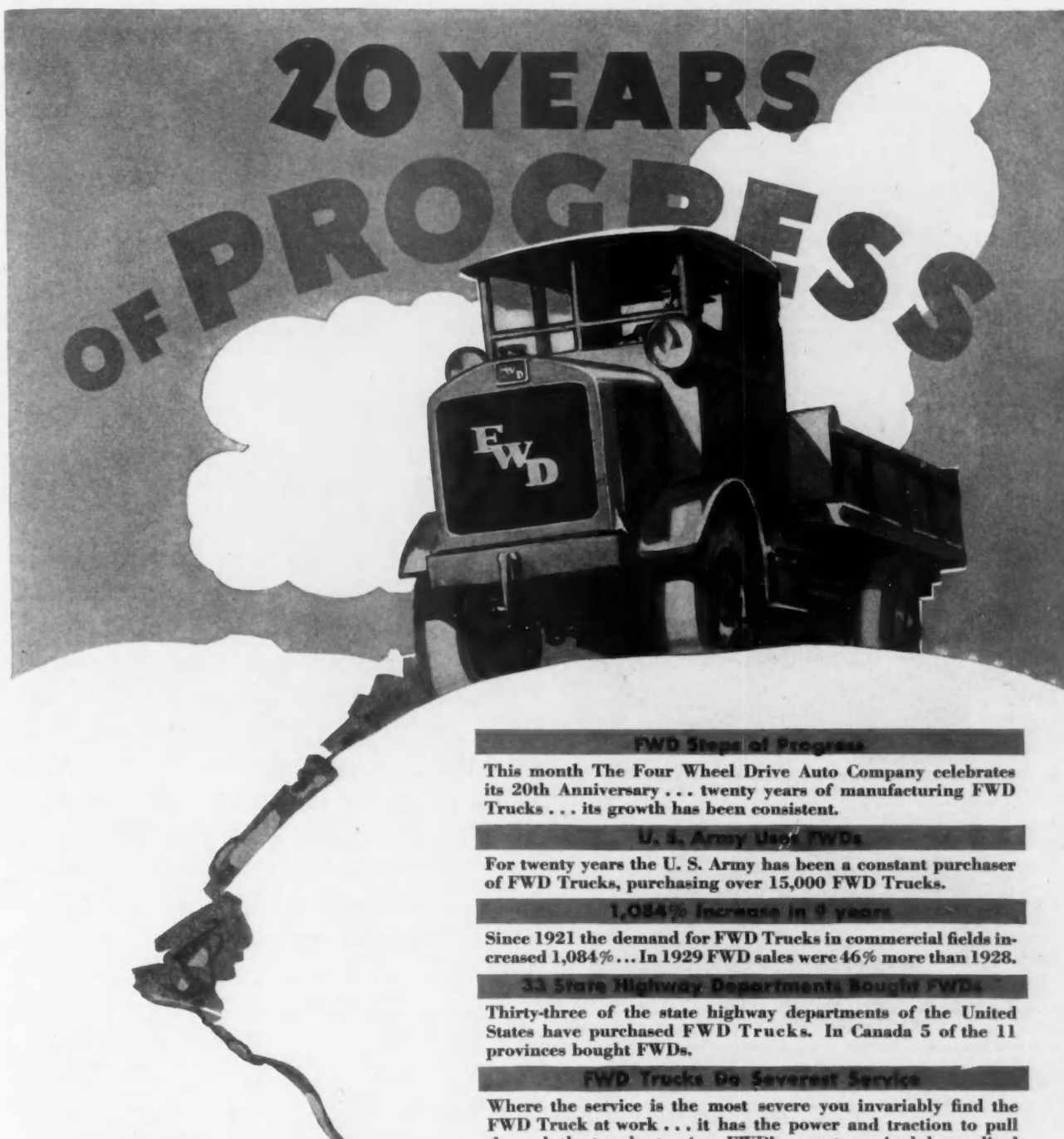


In the circle, a micro-photograph of the molecular structure of Gunitite magnified 100 diameters, showing the even distribution of the uniform, fat flakes of graphite which give to Gunitite its superior wearing qualities.

The ferrous matrix of Gunitite is essentially the same as tool steel, being lamellar "Pearlite." Pure steel, however, has undesirable features under friction which the short, fat flakes of graphite, evenly distributed in Gunitite, overcome. The "stickiness" is eliminated and drums of Gunitite cannot score, tear or grab other materials.

The Gunitite Drum catalog is sent free on request. Keep a copy in your files and order Gunitite Drums on every replacement.





DEALERS: Get our complete dealer proposition ... we can show you why FWD dealers sell to new fields ... why they get a big percentage of repeat business. Write today for our plan.

FWD Steps of Progress

This month The Four Wheel Drive Auto Company celebrates its 20th Anniversary ... twenty years of manufacturing FWD Trucks ... its growth has been consistent.

U. S. Army Uses FWDs

For twenty years the U. S. Army has been a constant purchaser of FWD Trucks, purchasing over 15,000 FWD Trucks.

1,084% Increase in 9 years

Since 1921 the demand for FWD Trucks in commercial fields increased 1,084% ... In 1929 FWD sales were 46% more than 1928.

33 State Highway Departments Bought FWDs

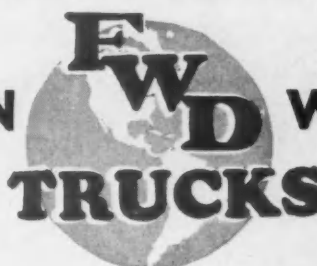
Thirty-three of the state highway departments of the United States have purchased FWD Trucks. In Canada 5 of the 11 provinces bought FWDs.

FWD Trucks Do Severest Service

Where the service is the most severe you invariably find the FWD Truck at work ... it has the power and traction to pull through the toughest going. FWD's acceptance is duly credited to its ability to serve efficiently in extraordinary as well as in ordinary truck transportation ... it is a dependable, economical power unit.

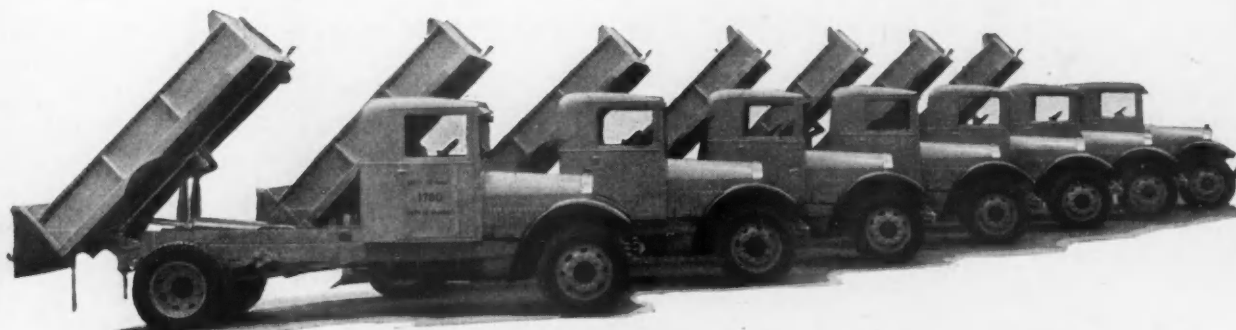
THE FOUR WHEEL DRIVE AUTO COMPANY, Clintonville, Wisconsin
Canadian Factory ... KITCHENER, ONTARIO

BACKED BY NATION



WIDE SERVICE

TRUCKS

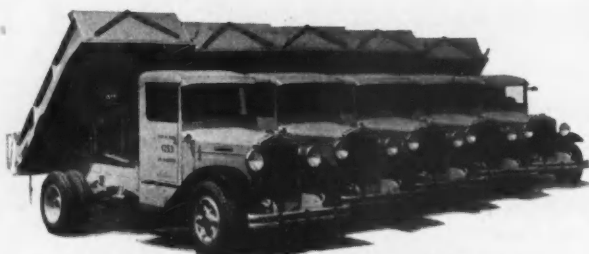


These seven Whites, Model 51A chassis, are part of a fleet of seventeen, equipped by the Ohio Truck Body & Wagon Co. of Cleveland for the Ohio State Highway Department with Model 6UB St. Paul Underbody Hydraulic Hoists. The bodies are Type 12, 2½ yd. capacity. The seventeen Whites, together with the six Internationals and five Diamond Ts pictured below, show a total of twenty-eight St. Paul Hoist equipped jobs recently added to the Ohio State Highway Department fleet.

Install 'em—Work 'em and Forget 'em!



Six Model 6UB St. Paul Hoist equipped Internationals, Model A-5. Part of a fleet purchased by the Ohio State Highway Department.



Five Model 6UB St. Paul Hoist equipped Diamond Ts, Model 503, composing part of a fleet of 28 St. Paul Hoist equipped trucks of the Ohio State Highway Department.

That's what you do with St. Paul Hoists. You'd hardly know they're there, because they're out of sight, hidden in the chassis frame. But when you touch the control levers, your St. Paul Hoist is very much *there*. With ease the powerful pull bars raise the load, no matter how uneven it is. Without strain, up comes the body to a high dumping angle, which allows the load to be discharged quickly, cleanly and economically. Keep St. Paul Hoists busy. It's good for 'em!

If you have a new truck or an old truck, a heavy truck or a light truck—there is a St. Paul Hoist for it.

"Ask the Dump Truck Driver on the Job"

—St. Paul—

**VERTICAL AND UNDERBODY
HYDRAULIC HOISTS**

St. Paul Hydraulic Hoist Company

Factories at St. Paul, Minnesota

A St. Paul Hoist Distributor and Service Station is near you. Write for name and address.

WHAT YOU HAVE WAITED FOR! Commercial Car Lacquer developed by ACME

Startling new lacquer discovery is first practical lacquer system for trucks and other commercial cars

Commercial Car Lacquer is in a class by itself! No other product even barely resembles it. Only Acme could develop it to its high degree of perfection.

With it refinishers can get startlingly beautiful results—results that were formerly thought impossible.

Commercial Car Lacquer is the one practical and successful lacquer finish for trucks and used cars. It dries quickly to a beautiful gloss *without polishing*. Think of the labor this saves you.

You need no new equipment to apply it. Sprays on easily. Can be applied on wood or metal over an old lacquer finish or old paint or varnish finish. Easily outlasts varnish. Saves a lot of time on two-tone work because there is no long waiting for masking. Successive coats can be applied with a minimum loss of time. 100% reduction with Proxlin Thinner also lowers costs.



Absolutely non-injurious to health. No slow drying spray dust as is the case with an oil base product. Cleaner for the mechanic. Eliminates damage to other equipment.

Commercial Car Lac-

quer is, of course, permanent and non-bleeding. Even the vermilion will neither fade nor bleed through subsequent coats or lettering.

You will find it saves a great amount of time and money because it enables you to get cars and trucks out in record time, to say nothing about the extra satisfaction you give your most particular customers.

Commercial Car Lacquer, like all Acme products, is priced fairly. Prices of Commercial Car Lacquers are as follows:

Black	- - - - -	\$5.00 a gallon
Regular colors	- -	\$6.00 a gallon
White & Vermilion		\$7.50 a gallon

It is available in eight standard truck colors

ACME WHITE LEAD AND COLOR WORKS

(Proxlin Division)

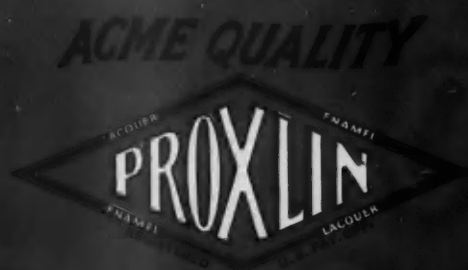
DETROIT

MICHIGAN

Read these amazing advantages:

1. Dries to a beautiful gloss without labor of polishing. Saves clear gloss lacquer cost.
2. Permanent, non-bleeding. Outlasts varnish. Carries 100% reduction.
3. Not injurious to health. No special room needed. Dries as soon as it hits surface.
4. No new lacquer equipment needed to apply it. Solid covering.
5. Speedy system. No long tie-up of equipment and space.

USED CAR DEALERS: PROXLIN COMMERCIAL CAR LACQUER WILL CUT YOUR REFINISHING COSTS



COMMERCIAL CAR LACQUER

See catalog and list of dealers on next page

This Efficient and Business-like Method May Solve Your Brake Maintenance Problems

The problem of brake maintenance is one which every fleet operator must face squarely and which can be solved only by thorough study and testing.

Frequent relining and readjustments increase the cost of brake maintenance to an alarming extent. We suggest that you determine exactly how much brake maintenance is costing you and then take steps to reduce it.

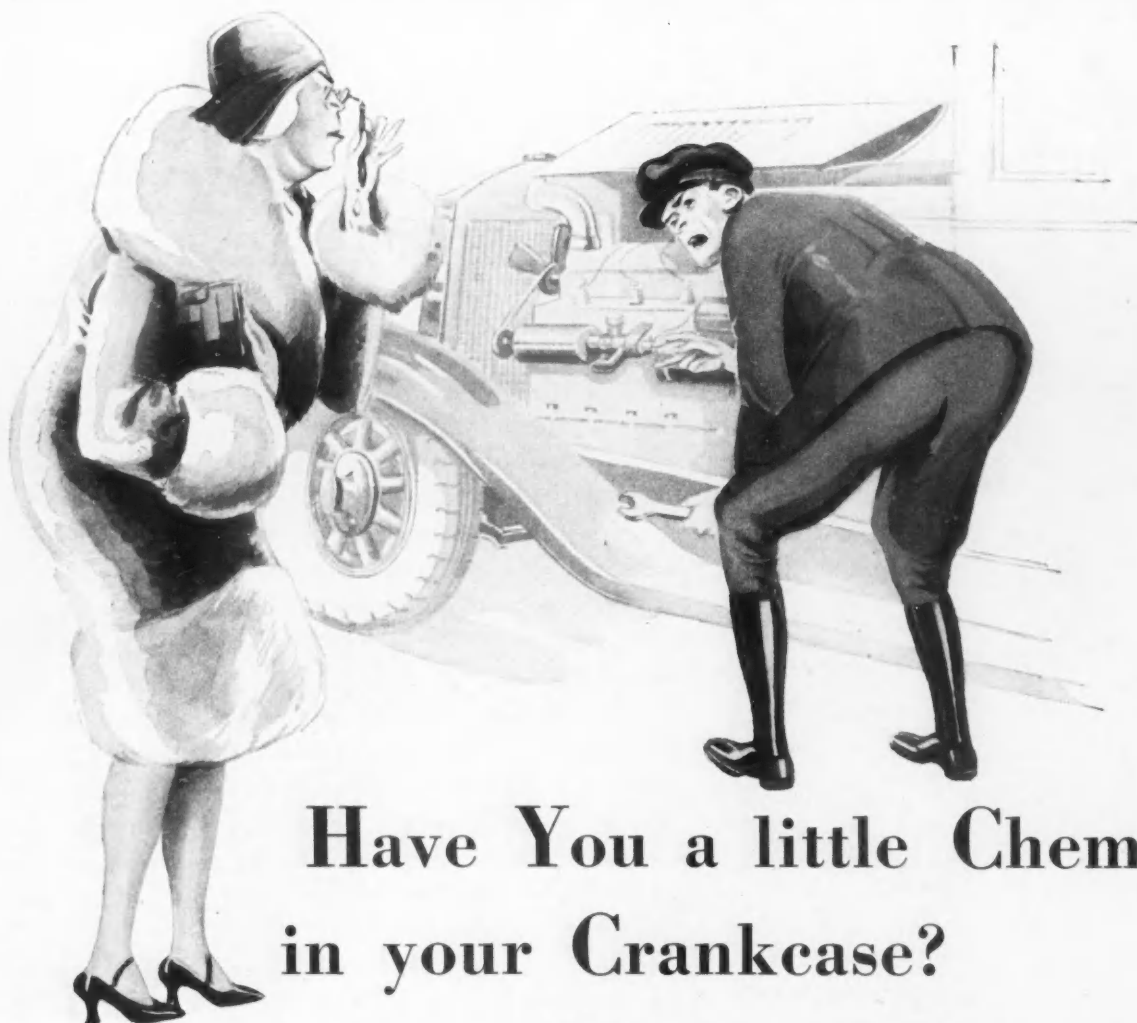
The most important step is to methodically select the best brake lining you can find for your job. The only way to determine this satisfactorily is to test various linings yourself, on your own trucks—keeping careful records of mileage, readjustments, performance, installation time, adjustment time, costs, etc., and making frequent inspections.

That is exactly what we urge you to do. There are many reasons why we feel that Grey-Rock Industro-Truck is the best heavy duty brake lining you can obtain. But those reasons are of far less importance to you than an actual demonstration of its superiority—proven by yourself, on your own trucks. Such tests are the reasons why so many of the country's leading fleet operators are using Grey-Rock Industro-Truck exclusively.

We will be glad to give you all the assistance possible—suggestions for keeping records, making inspections, etc. Arrangements may be made by writing direct to us.

UNITED STATES ASBESTOS DIVISION
of Raybestos-Manhattan, Inc., MANHEIM, PA.





Have You a little Chemist in your Crankcase?

Actually that's what VISCO-METER is! A sturdy mechanical chemist that analyzes the motor oil continuously and keeps every driver posted as to what's in his crankcase. Visco-Meter is always on the job whenever the motor's running.

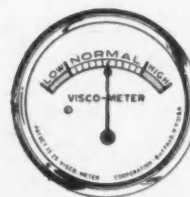
Measures Viscosity, Saves Oil

Visco-Meter is in step with the broad educational work which aims to show the motoring public the value of correct lubrication. To the efforts of oil companies and manufacturers of oil filters, purifiers and other lubricating devices, Visco-Meter joins forces. May the cars of the future run even smoother and farther!

Visco-Meter is not a pressure gauge nor a volume indicator, but an accurate instrument which shows the viscosity of the lubricant at the moment of observation. No guesswork, no fussing with petcocks or plugs; the dial on the instrument board reports the oil condition continuously. Visco-Meter means that you'll get the greatest possible mileage *safely* out of every quart of oil . . . This new device also shows up clogged lubricating systems, leaks and faulty oil pumps.

Easily Installed

It takes the average mechanic only a short while to install the Visco-Meter. No special tools are needed. Complete instructions furnished for each make of truck. Ruggedly built with only one moving part, Visco-Meter never needs servicing. The dial can be attached in place of the pressure gauge, on the steering column or anywhere on the instrument board.



Stop courting costly repairs and wasting good oil! Send coupon for full particulars on the Visco-Meter . . . Visco-Meter Corporation, 316 Grote Street, Buffalo, N. Y.

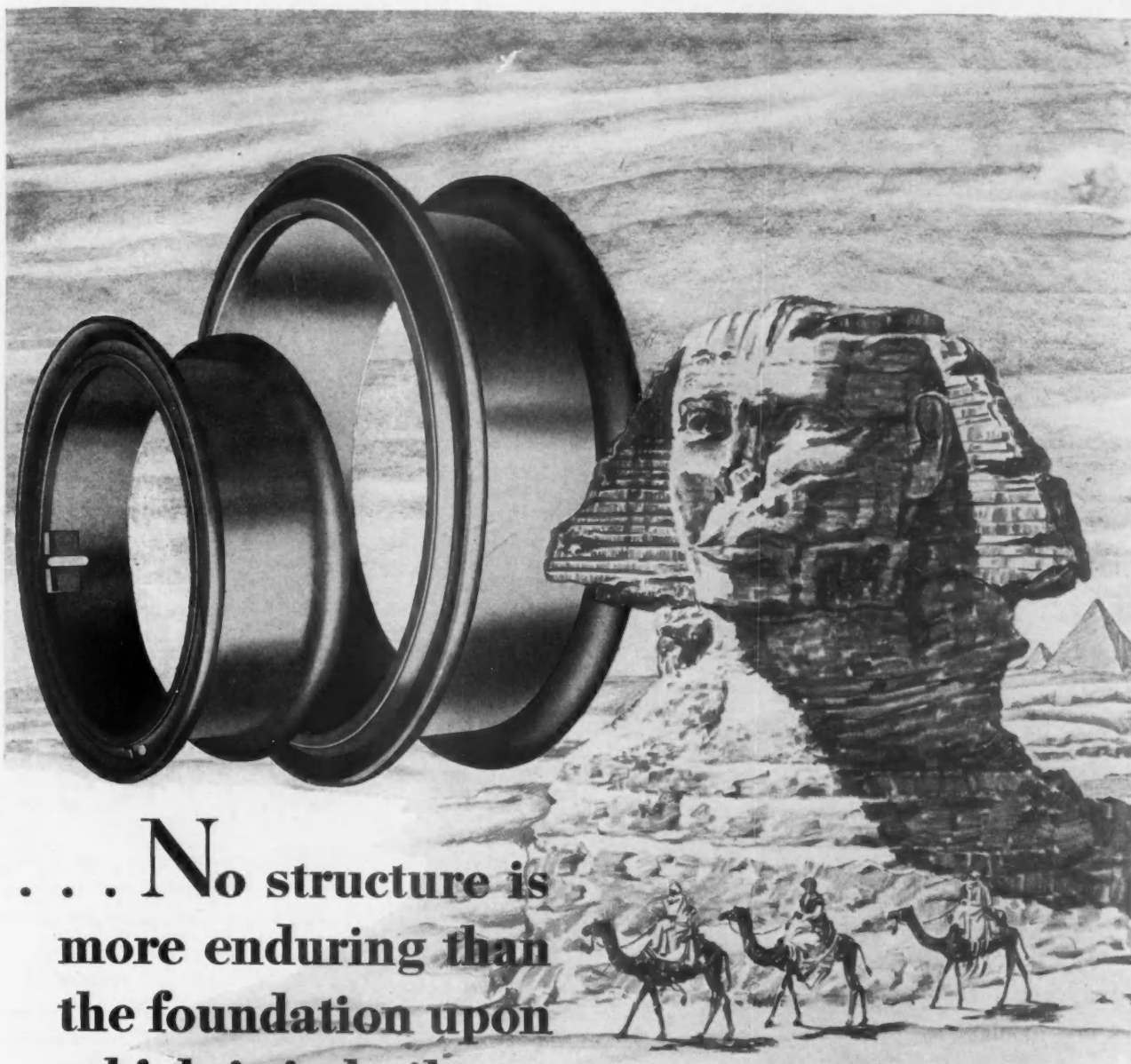
The VISCO-METER

Takes the Guesswork out of Motor Lubrication

Visco-Meter Corp., 316 Grote Street, Buffalo, N. Y.

Gentlemen:—Please send me complete information on the VISCO-METER.

Name Address



... No structure is
more enduring than
the foundation upon
which it is built ...

Firestone

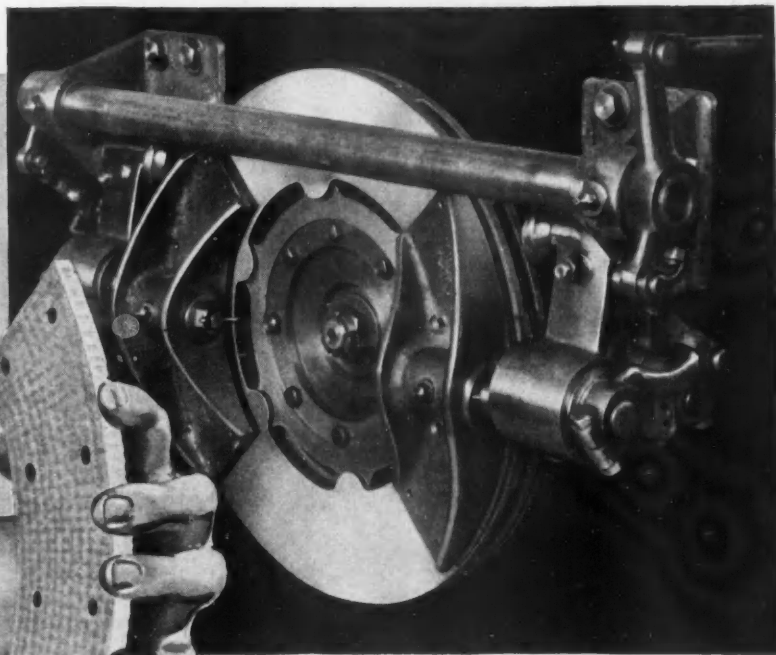
CONTINUOUS
BASE RIMS ... assure maximum tire
mileage, best performance
and longest service

FOR ALL TYPES OF WHEELS • WIRE • WOOD • STEEL • CAST

Copyright, 1930, The Firestone Steel Products Co.

*The Commercial Car Journal
and Operation & Maintenance*

July, 1930



Built for hard Service!

TRU-STOP is more than a parking brake—it is built for constant hard use. It gives positive braking action at any speed. It is a dependable secondary brake, well able to handle the heaviest load in case of necessity.

Take-up for natural brake lining wear is a matter of few minutes. Re-lining a TRU-STOP Brake requires at the most a half hour. If you keep extra shoes on hand, a complete re-lining job can be done in less than twenty minutes.

Standard make transmissions have provisions for mounting TRU-STOP Brakes. Fifty makes of buses and trucks either use TRU-STOP as standard equipment or are prepared to furnish it at your request.

For complete information address—

AMERICAN CABLE COMPANY, Inc.

Automotive Division

Bridgeport, Conn.; 3-111 General Motors Bldg., Detroit, Mich.



TRU - STOP

A REAL EMERGENCY BRAKE



.....SOMETIMES WE WISH WE HAD A CIRCUS!

Voltage Regulation Minimizes Electric Maintenance

- 1 Battery cannot be overcharged.
- 2 The battery is charged only at the correct rate for its state of charge.
- 3 Battery will operate longer without requiring replenishing of electrolyte.
- 4 Life of battery greatly prolonged.
- 5 Lights can be operated direct from generator.
- 6 Loose connections will not cause lamp bulbs to burn out.
- 7 Makes most economical generator system.
- 8 Any Leece-Neville Voltage Regulated Generator can be used without battery.
- 9 Lamp life greatly prolonged.
- 10 Motor coaches fitted with Leece-Neville voltage regulated generators provide passengers with satisfactory illumination and safe transportation.

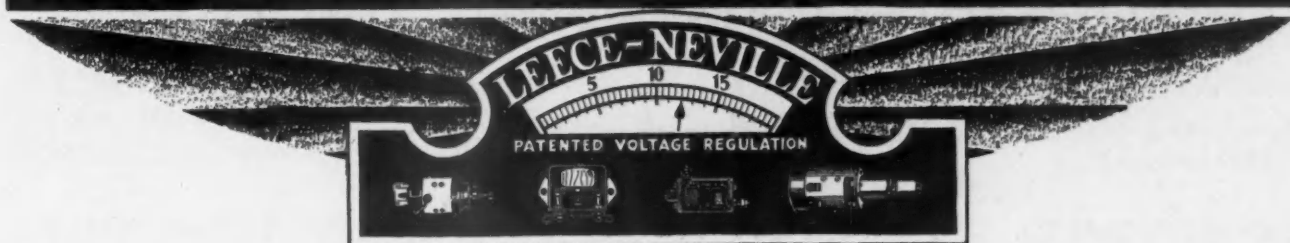
—How we'd like to plaster the town with "The Greatest Show on Earth." —How we'd like to glorify the big top, the flying trapeze, the bare-back riders, the chariot race— and pink lemonade.

It makes our heart sad to think we can't do the same with the Leece-Neville Voltage Regulator. It's such an unromantic thing. It just keeps batteries constantly in good working order, preventing costly delays and disgruntled customers.

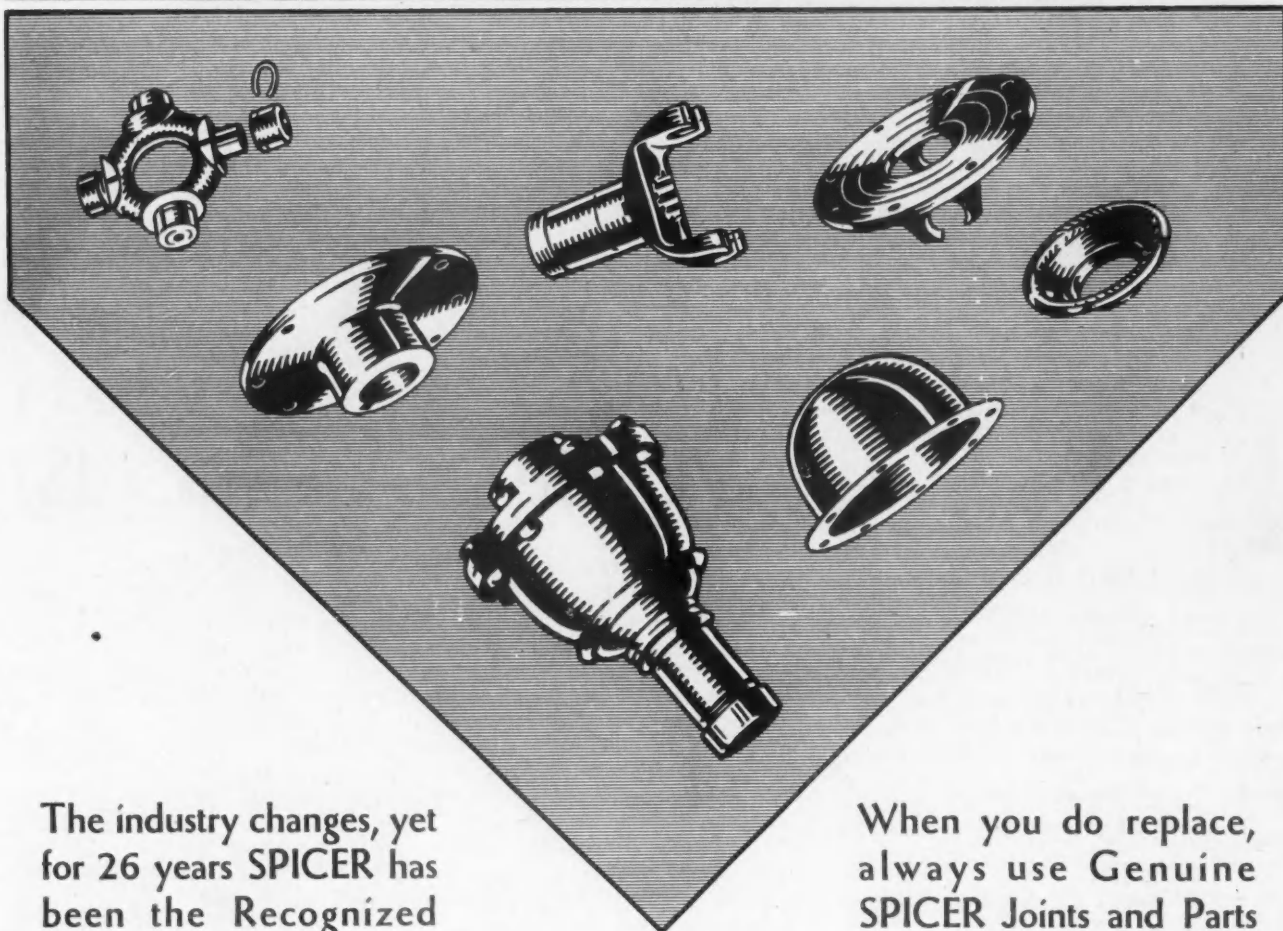
That's our story. All we can do is to keep plugging away at it month after month, year in and year out. *The Leece-Neville Voltage Regulator is a good product. It keeps batteries constantly in good working order.* There are satisfied Leece-Neville users in your territory and we can prove it at the same time you ask us to prove our story on Voltage Regulation.

BUT ALL WE HAVE IS A PRACTICAL NECESSITY

LEECE-NEVILLE CO. — CLEVELAND, OHIO



GENUINE SPICER PROPELLER SHAFT PARTS



The industry changes, yet
for 26 years SPICER has
been the Recognized
Standard.

When you do replace,
always use Genuine
SPICER Joints and Parts



ASSOCIATED Spicer COMPANIES

BROWN-LIPE
CLUTCHES and
TRANSMISSIONS

BROWN-LIPE GEAR CO.
SYRACUSE NEW YORK

July, 1930

SALISBURY
FRONT and REAR
AXLES

SPICER MFG. CORP.
TOLEDO OHIO.

SPICER
UNIVERSAL
JOINTS

PARISH
FRAMES and
STAMPINGS

PARISH PRESSED STEEL CO.
READING PENNA.

*The Commercial Car Journal
and Operation & Maintenance*

BRUBAKER CUTTING TOOL APPLICATION CHART

MAKE OF CAR	ENGINE				DRIVE SHAFT		TRANSMISSION		REAR END	
	Model	Year	Make	Model	Year	Make	Model	Year	Make	Model
Ford	Model A	1927-1931	Ford	Model A	1927-1931	Ford	Model A	1927-1931	Ford	Model A
Chrysler	Model A	1927-1931	Chrysler	Model A	1927-1931	Chrysler	Model A	1927-1931	Chrysler	Model A
Studebaker	Model A	1927-1931	Studebaker	Model A	1927-1931	Studebaker	Model A	1927-1931	Studebaker	Model A
Ward	Model A	1927-1931	Ward	Model A	1927-1931	Ward	Model A	1927-1931	Ward	Model A
Overland	Model A	1927-1931	Overland	Model A	1927-1931	Overland	Model A	1927-1931	Overland	Model A
Reo	Model A	1927-1931	Reo	Model A	1927-1931	Reo	Model A	1927-1931	Reo	Model A
Marquette	Model A	1927-1931	Marquette	Model A	1927-1931	Marquette	Model A	1927-1931	Marquette	Model A
Ward	Model A	1927-1931	Ward	Model A	1927-1931	Ward	Model A	1927-1931	Ward	Model A
Overland	Model A	1927-1931	Overland	Model A	1927-1931	Overland	Model A	1927-1931	Overland	Model A
Reo	Model A	1927-1931	Reo	Model A	1927-1931	Reo	Model A	1927-1931	Reo	Model A
Marquette	Model A	1927-1931	Marquette	Model A	1927-1931	Marquette	Model A	1927-1931	Marquette	Model A

BRUBAKER ADJUSTABLE BLADE REAMER WITH PILOT

BRUBAKER INTERCHANGEABILITY TABLES

HANDBOOK OF CUTTING TOOL SPECIFICATIONS

REAMERS
VALVE RESEATERS
TAPS & DIES
SCREW PLATE SETS

BRUBAKER

IT'S FREE!

NEWS!! THAT SPELLS GREATER SHOP EFFICIENCY

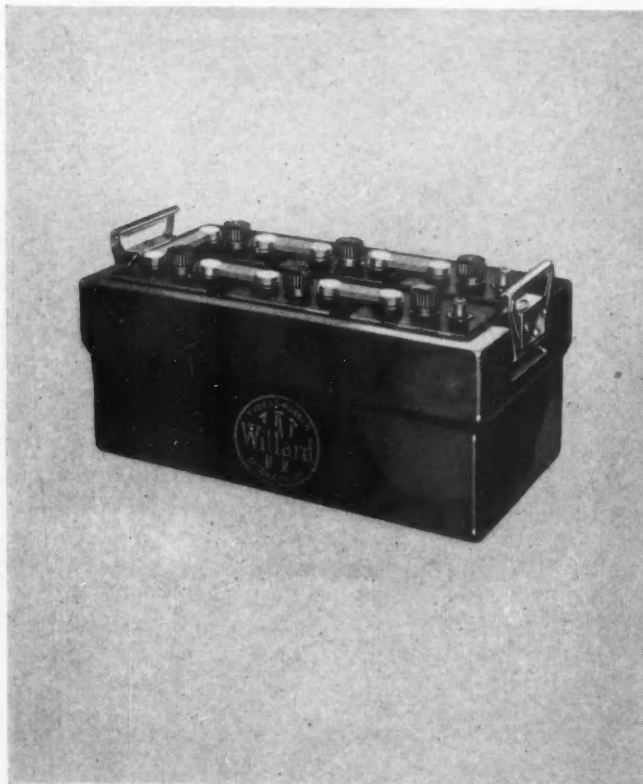
The Brubaker Cutting Tool Application Charts for Trucks are off the press!

Complete tabulation of reamer sizes applying to the various makes of trucks. Interchangeability data to guide the truck serviceman in buying and using reamers, valve reseaters, taps, dies and special tools.

This comprehensive collection of information is but a part of the Brubaker plan . . . which includes the reconditioning of the tools you own and the safe and sure selection of the tools you buy.

W. L. BRUBAKER & BROS. CO.
MILLERSBURG, PENNA.

Hundreds of fleet owners and truck service stations have requested a copy of the new Brubaker Handbook. Your free copy is ready. Write for it.



Now a Bus Battery . . . that is "ALL RUBBER"

After months of laboratory study and thousands of miles of road tests in service, Willard now offers a bus battery that meets the most exacting demands of operation with greater dependability, longer life. All-rubber case construction, greater sediment space, extra thick plates, and Thread-Rubber insulation — these are features of Willard quality now adapted specifically to bus requirements in this superior heavy-duty battery. *The only battery that has no wood whatever in its construction.*

. . . And a Dependable Companion Type with a Rubber Case

Under the same inflexible standard of quality construction Willard offers also this companion type of bus battery. With the same heavy-duty long life plates, extra-deep sediment space, and one-piece rubber case, its construction is identical with the other in every detail except insulation. Here genuine Port Orford cedar separators are used. These are scientifically treated—the best that can be made from wood.



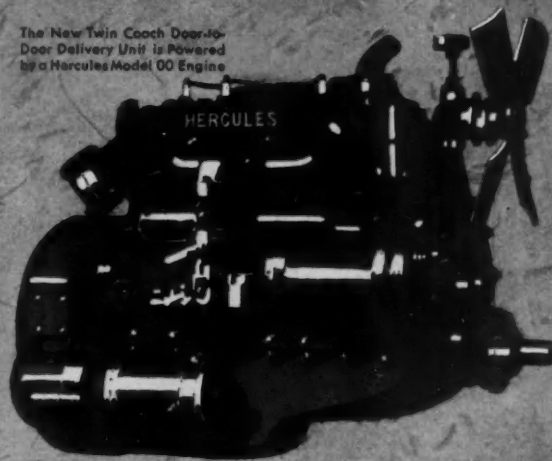
Willard STORAGE BATTERIES
CLEVELAND • OHIO
LOS ANGELES • CALIF. • TORONTO • ONT.

HERCULES ENGINES



Hercules Engines are built in a complete line of Four and Six Cylinder models, ranging in size from 13 to 115 H. P. They are advanced in design, sturdy in build, faithful and frugal in performance. • • Logically Hercules Engines power leading makes of commercial vehicles, large and small—naturally they have earned a position of acknowledged leadership in the heavy-duty power field.

The New Twin Coach Door-to-Door Delivery Unit is Powered by a Hercules Model 60 Engine



HERCULES MOTORS CORPORATION, CANTON, OHIO

West Coast Branch: San Francisco, Cal. Mid-Continent Branch: Tulsa, Okla.

Distributors: Smith-Booth-Usher Co., Los Angeles, Cal.; Edward R. Bacon, San Francisco, Cal.; F. C. Richmond Co., Salt Lake City, Utah; Worthington Machinery Corp. of Oklahoma, Tulsa, Okla.; Norvell-Wilder Hardware Co., Houston, Tex.; Boviard & Co., Bradford, Pa. European Distributors: Automotive Products Co., 3 Berners St., London, W. 1.

SPEED! ***not only possible...*** **but SAFE** **because of these wheels**

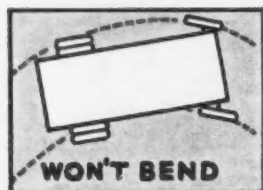
You want speed to haul more pay loads, per working day, at less cost. But speed can be an expense and a hazard without the proper equipment.

A speeding truck must have a good wheel — always equal to the terrific strains of high speed service. It must not bend, break or sway—it must be cool running.

The Dayton Dual Pneumatic Steel Wheel gives you **SAFE** wheel service — always. It will not bend or weaken or lose its positive true alignment under the toughest kind of load and road conditions. You will never spend a cent for wheel repairs with Daytons.

Dayton Duals have been proved the coolest running wheels, dissipating destructive brake drum heat, protecting tire beads and brake linings.

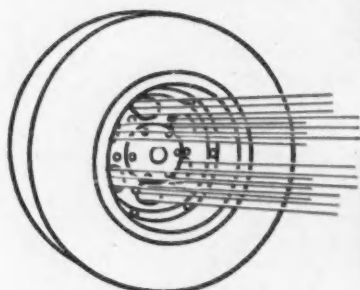
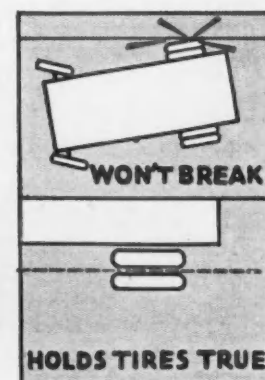
Protect your rubber investment—get more mileage out of your tires—insure your trucks with *safe wheel service* by installing Dayton Dual Pneumatics when you change over. Specify them when you buy that new truck.



Dayton Brake Drums

are Superior in Strength and Wearing Qualities. The metal, made by a special process in electric furnaces, has an even distribution of graphitic carbon. Dayton Brake Drums last longer, stay smooth and save brake linings.

You can change over easily from solids to pneumatics with Dayton Duals. Send for valuable information and name of nearest dealer.



RUNS COOL

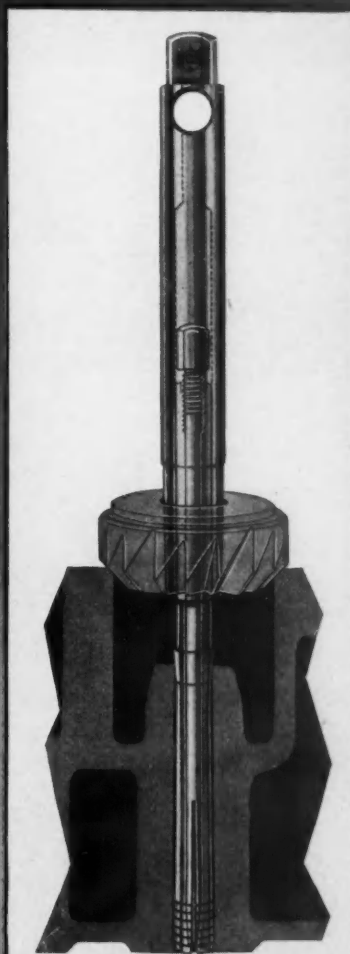
The DAYTON STEEL FOUNDRY Co., Dayton, Ohio

We have acquired the Tigerloy Brake Drum Division of the Massillon Steel Castings Company of Massillon, Ohio

Dayton

The Mark of a Good Wheel

VALVE SEAT REAMERS



"Sioux" saves You Money on the finest Reamer Equipment

YOU want reamer equipment that assures the most accurate and satisfactory work at the lowest labor cost. "Sioux" gives you that! You want reamers that will "stand the gaff" . . . hold their keen cutting edge and last a long time. Sioux gives you that, too . . . All Sioux Reamers are made of special alloy steel, treated to stand up on valve seat reaming.

In addition to all that, "Sioux" offers you *real economy* in reamer equipment by providing Sioux Universal Type Reamers, each size of which can be used on valve seats of several different sizes, and Sioux Expanding Pilot Stems which make it unnecessary to buy a large stock of oversize and undersize stems.

It's easy to do accurate work "the Sioux way". The Sioux Expanding Pilot Stem holds the reamer perfectly centered over the valve seat. The reamer cannot travel in the path of the worn valve seat. It must ream the seat concentric with the guide hole.

Your Jobber Sells Them.

ALBERTSON & CO. INC., Sioux City, Iowa, U. S. A.



No. 82. Valve Seat Reamer \$69.00
Set. Complete Net

STANDARD THE WORLD OVER

EXPANDING PILOT STEMS

HUNT-SPILLER AIR FURNACE GUN IRON BRAKE DRUMS

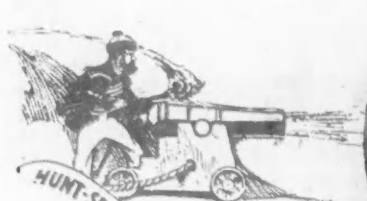
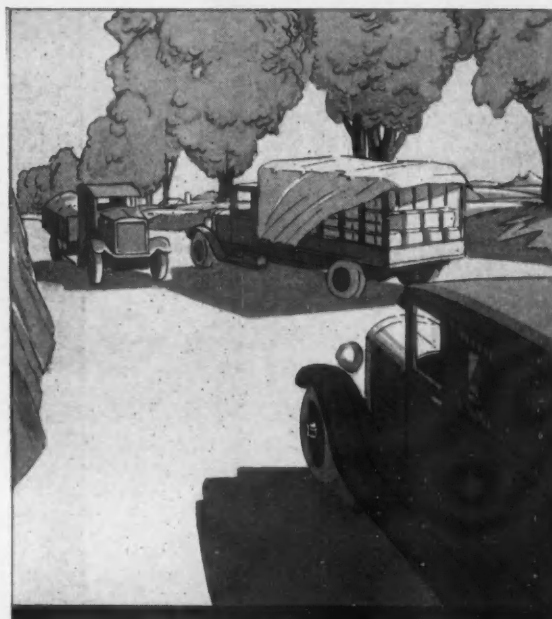
**FOR FEWER
SHOP LAY-OVERS
MORE LOAD-HOURS
and GREATER PROFIT**

A truck is only as dependable as its brakes. Dependable performance is most essential to profit-producing truck fleets.

HUNT-SPILLER AIR FURNACE GUN IRON BRAKE DRUMS reduce brake maintenance costs, insure longer productive hours which are so essential to increased profits.

H. S. G. I. is a mark of quality. It stamps a century old material especially adapted to resist wear at high temperatures.

Replace with HUNT-SPILLER AIR FURNACE GUN IRON BRAKE DRUMS and specify them for your new equipment. There is a HUNT-SPILLER design for every truck and bus.



AIR FURNACE
GUN IRON
for BRAKE DRUMS



HUNT-SPILLER MFG. CORP

J. G. Platt, Pres. and Gen. Mgr.

V. W. Ellet, Vice-Pres.

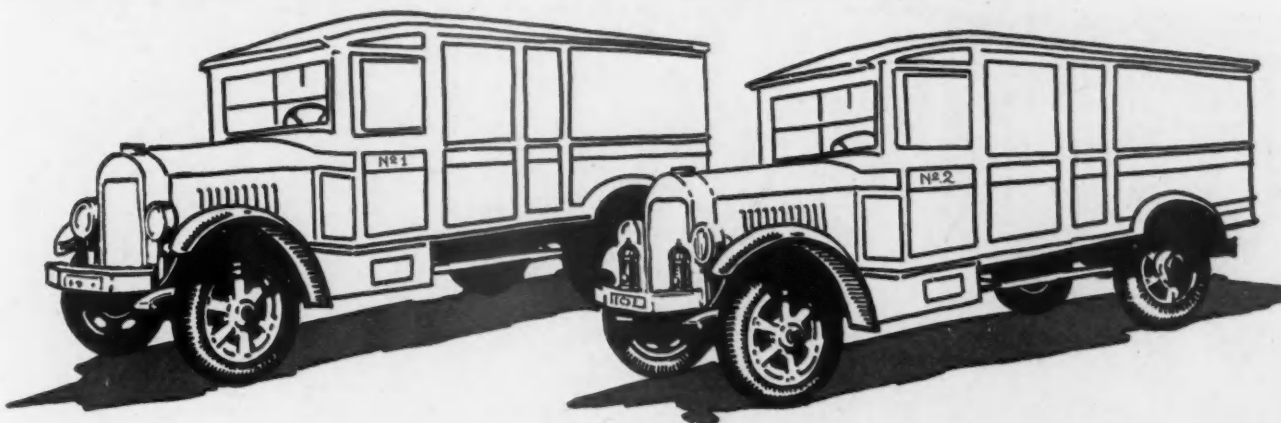
Office and Works

383 Dorchester Avenue
South Boston, Mass.

July, 1930

The Commercial Car Journal
and Operation & Maintenance

Find the Difference Between These Two Trucks—



—and you will find the difference between
high and low cost of maintenance

THESE two trucks are identical—with one exception. The difference lies in the fact that truck No. 2 has been equipped with Cleco-Gruss Air Springs.

Truck No. 2 is going to give more mileage and will cost less to operate and maintain. The first cost of the Air Springs will be quickly compensated by lowered maintenance.

Air Springs are the only shock absorbers that protect the vehicle from road shock. All others, being spring-check devices, merely restrict the necessary action of the steel springs and actually *increase* the impact of the blow.

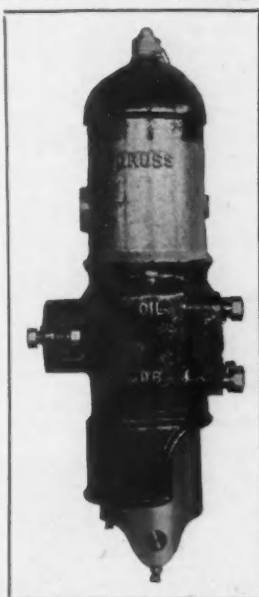
Air springs in no way restrict the free steel-spring action and their powerful cushions of compressed air absorb all destructive

impact. They give protection to the cargo, smoother riding and cut down delivery time.

For over ten years, air spring users have enjoyed greatly reduced maintenance of springs, body, electrical system, bearings and even the motor. Costing less than a set of tires, Cleco-Gruss Air Springs outlive the vehicle and save their cost many times over.

Truck manufacturers who have standardized on Cleco-Gruss Air Springs offer you *extra value*—longer life and lowered maintenance.

Cleco-Gruss Air Springs are manufactured at Cleveland by The Cleveland Pneumatic Tool Company and serviced the world over. Complete information sent on request.



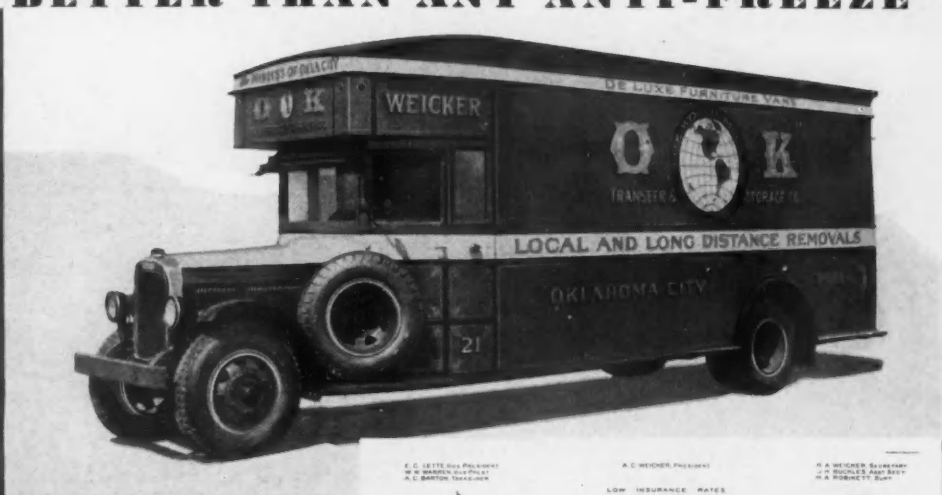
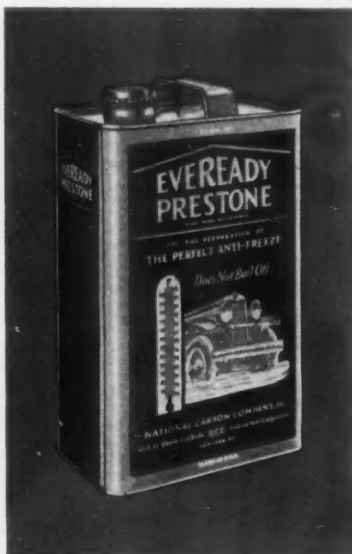
GRÜSS
Sleeve Type
AIR SPRING



WESTINGHOUSE
Piston Type
AIR SPRING

THE SHOCK ELIMINATORS FOR TRUCKS-BUSSES-PASSENGER CARS

OKLAHOMA TRANSFER COMPANY "LIKES EVEREADY PRESTONE BETTER THAN ANY ANTI-FREEZE"



IT'S probably important to you to keep your fleet in safe, uninterrupted operation in winter, at the least expense. Choice of the proper anti-freeze is vital. There is no need to resort to the trial and error method . . . fleet-owners all over the country have found safe, sure, economical protection in Eveready Prestone.

Not only does Eveready Prestone give complete protection, but one filling lasts all winter, regardless of variations in temperature. Warm days, it won't boil off. Cold days, it's on the job. Eveready Prestone is highly concentrated, so less of it is needed. Because of that, and because of the absolute security it gives your cars, the use of Eveready Prestone is a definite economy. Compare the total cost per car of Eveready Prestone's protection with that of any other permanent anti-freeze on the market.

Another thing: You can put it in early, any time, at your own convenience. No need for hasty, perhaps inadequate preparation at the first forecast of freezing. After you've seen to it that cooling-systems are clean and tight, a single filling of Eveready Prestone puts your fleet in shape for the entire winter. Plan for it now. Write for your copy of "Eveready Prestone Service Manual."

★ ★ ★

The Eveready Hour, radio's oldest commercial feature, is broadcast every Tuesday evening at nine (New York time) from WEAJ over a nation-wide N. B. C. network of 30 stations.

NATIONAL CARBON COMPANY, INC.
General Offices: New York, N. Y.

Branches: Chicago Kansas City New York San Francisco

Unit of Union Carbide **UCC** and Carbon Corporation

E. C. LITTLE, Vice President
W. H. BARNES, Secretary
A. E. BARTON, Treasurer

SPRINKLER SYSTEM
HEADERS
NATIONAL, PORTLAND AND ROYAL PORTLAND CEMENTS
FIRE BRICKS AND OTHER BUILDING MATERIALS
PAINTS AND PAINTING SUPPLIES, ETC.

A. C. WEICKER, President

OK

TRANSFER & STORAGE CO.

ESTABLISHED 1888
GENERAL WAREHOUSING
AND DISTRIBUTION

H. A. WEICKER, Secretary
J. B. BOWLES, Asst. Secy
H. A. ROBERTS, Asst. Secy

LOW INSURANCE RATES

OK

TRANSFER & STORAGE CO.

GENERAL OFFICES AND WAREHOUSE
810 N. 1ST STREET, OKLA.
OKLAHOMA CITY, OKLA.

January 7th, 1930

National Carbon Company
19th & Campbell Street
Kansas City, Mo.

For: Mr. C. E. Anderson, Division Mgr.

Gentlemen:

Some time ago we purchased some of your EVEREADY Prestone to be used in our large trucks and business cars to keep the radiators and motors from freezing up. We have used this PRESTONE to a very good advantage during the recent cold spells that we have had, and find it to be very effective.

We have used quite a number of anti-freezes during the last few winters. Our mechanics report that they like EVEREADY Prestone better than any we have ever used. This preparation is also used in our trucks that are making cross country trips.

We thought you would like to have this information.

Yours very truly,
O. K. TRANSFER AND STORAGE COMPANY
Per: *A. G. Weicker*

KAR:BN

"LET STORAGE HELP YOU"

NEW YORK OFFICE
19th & Campbell St.
PHONE 4-1234

CHICAGO OFFICE
101 N. W. 1st St.
PHONE 4-1234

KANSAS CITY OFFICE
19th & Campbell St.
PHONE 4-1234

EVEREADY PRESTONE

(TRADE-MARK REG.)

THE
ONE-SHOT ANTI-FREEZE

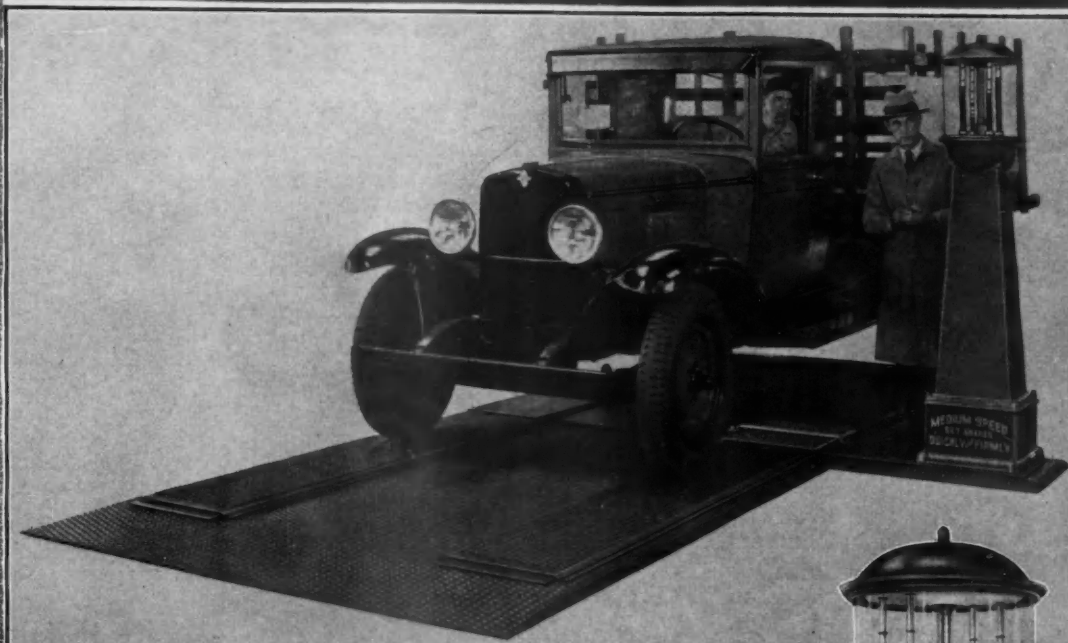
Thoroughly tested and 100% approved
by the Contest Board of the American
Automobile Association



WEAVER

Automatic

BRAKE TESTER



Instantaneous and Accurate

You are responsible for your drivers and undoubtedly realize the importance of safe brakes.

Here is a Tester that can be installed anywhere in your garage or shop, thus permitting your drivers to test their brakes every day.

It is the speediest Tester on the market, instantly showing the relative braking power of all four brakes simultaneously. It will soon pay for itself in the time it will save.

It is the only machine which accurately tests brakes under actual driving conditions—with the car under its own momentum.

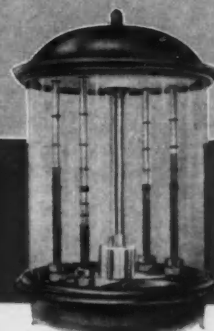
Easily and quickly installed, no expensive excavation necessary.

If you are interested, ask your Jobber Salesman or write us for details.

WEAVER MANUFACTURING COMPANY

Springfield, Illinois, U. S. A.

WEAVER CANADIAN CO., LTD., Chatham, Ontario



Simple in Operation

To test all four brakes merely drive the truck on the Tester and apply the brakes.

The relative braking power of each brake is immediately shown by the rise of the liquid in the gauges, the liquid remaining stationary while the truck is on the Tester.

The gauges, indirectly lighted electrically, are easy to read from any position. As the truck is driven off the Tester, either forward or backward, liquid automatically returns to zero, ready to test next truck.

Shop Equipment for Every Need . . . Brake Service . . . Wheel Alignment . . . Tire Service . . . Headlight Testing . . . Road Service
Motor Overhaul . . . Washing . . . Lubrication

...WE'LL HELP YOU CASH IN ON CHANGE OVER BUSINESS



HAVE you been passing up profitable change-over business, feeling, perhaps, you were not properly equipped to handle it? Go after this type of business -- and we'll help you cash in on it. Your nearest Authorized Distributor member of the National Wheel and

Write today for name of your nearest Authorized National Wheel and Rim Distributor. This emblem over his door is your guarantee of genuine parts and expert service.

Rim Association is fully equipped to help you with change-over jobs. He has the genuine wheels, rims and parts -- and trained service men to supply the expert assistance you need. Call on him and he'll service the job and show you a nice profit.

LET THIS EMBLEM



BE YOUR GUIDE

NATIONAL WHEEL & RIM ASSOCIATION

63 EAST LAKE STREET, CHICAGO, ILLINOIS

A National Organization of Authorized Factory Distributors for

Budd Wheel Company

Firestone Steel Products Company

Kelsey-Hayes Wheel Corp.

Cleveland Welding Company

United Motors Service, Inc. (Jaxon)

Dayton Steel Foundry Company

The Goodyear Tire & Rubber Co. (Rim Division)

Motor Wheel Corp.

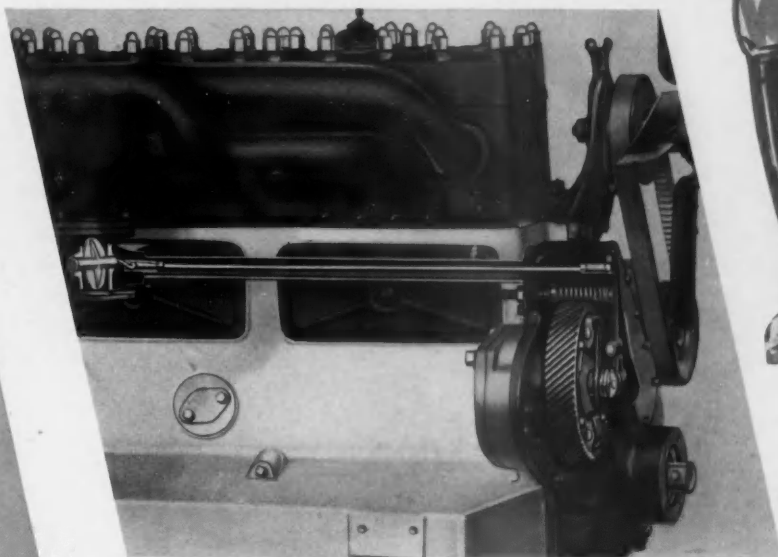
OVER SPEEDING STOPPED

The Waukesha Governor
is designed and built
into the Engine

It is a major feature
not a minor accessory.



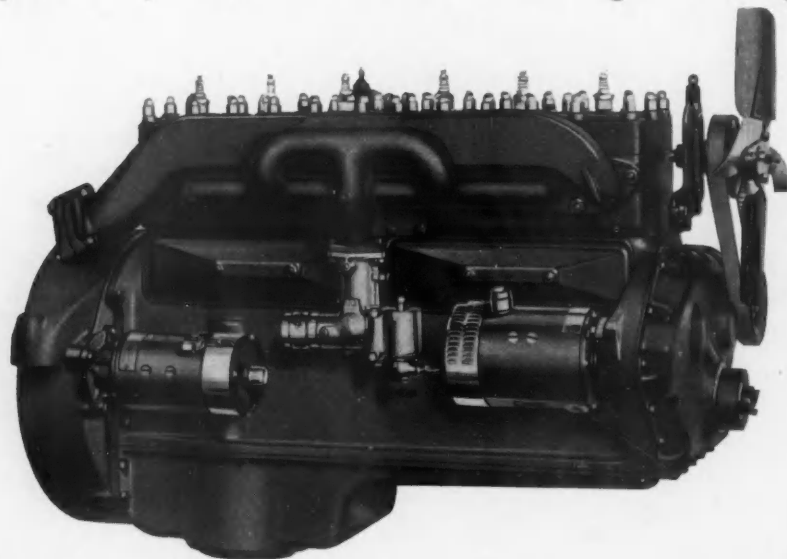
WAUKESHA MOTOR COMPANY
WAUKESHA, WISCONSIN



WAUKESHA

WAUKESHA ENGINES

on the job it's real horsepower
not paper horsepower



From the quarter-ton speed-
wagon to the six-wheel, ten-
ton truck . . . there is a
Waukesha for every size.

Bulletin No. 691 is just off the press.
Write for it TODAY.



WAUKESHA ENGINES

WAUKESHA MOTOR COMPANY
WAUKESHA, WISCONSIN

THE EMBLEM OF



QUALITY MOTOR TRUCKS

NEW PROFITABLE FLOOR

PLAN FOR DEALERS

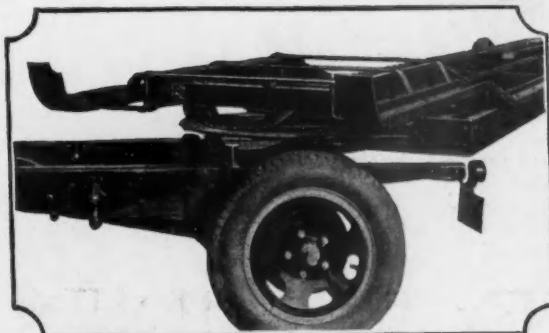
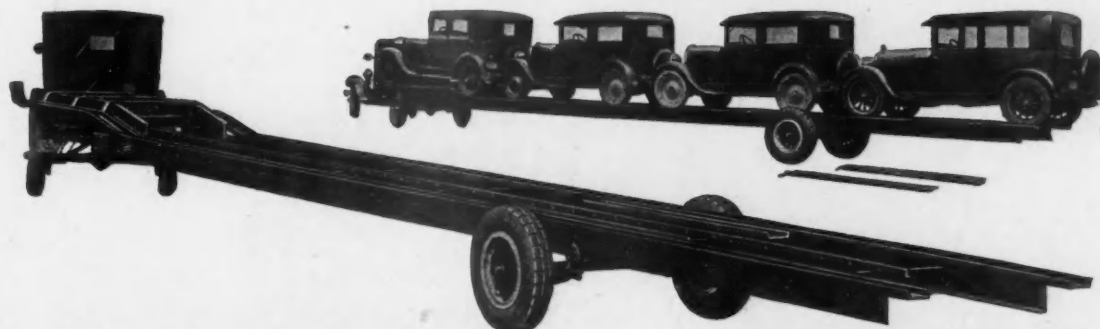
CAPACITY $\frac{3}{4}$ to 10 TONS

Fisher-Standard

STANDARD MOTOR TRUCK CO.

DETROIT, MICH.

Cable Code: Fishertruk



Note the closeup on the simplicity of attachment. Few moving parts eliminate possibility of maladjustment and repairs. Note also the Dual disc wheels . . . they are Budds. Timken Bearings are used to assure you the uttermost in freedom of swivel and bearing performance. Details of other equally refined features upon request.

KINGHAM AUTO TRANSPORTS

Many new and decided feature advantages are yours in a Kingham Transport. Alemite-Zerk lubrication; half elliptic underslung springs. Dual disc Budd wheels, Timken bearings, and low loading height makes it one of the outstanding transport buys of the year. Built in two capacities, five ton and four ton, with 55 and 50 foot approximate lengths.

If you have not received your latest catalog with specifications and details on the complete line . . . write for it today. It presents a new angle to winch and trailer purchases.

KINGHAM TRAILER COMPANY, INC.

LOUISVILLE, KENTUCKY

A LOAD BEHIND IS A TRIP AHEAD

634 EDITORS

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Hardware Age
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Nugent's Directory
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KEEP us fully informed of conditions in the broad field of business and trade.

FROM the great fund of facts constantly assembled by this large, able group, we bring to our efforts as publishers of some thirty publications and services a broader viewpoint, and the ability to serve fully and well.

BY dealing exclusively in facts, production in America has come to be world renowned. By a similar emphasis on fact, distribution will cure itself of many of its weaknesses.

BY dealing in facts we have won the loyalty and regard of our hundreds of thousands of subscribers, and materially assist in keeping billions of dollars worth of merchandise in motion.

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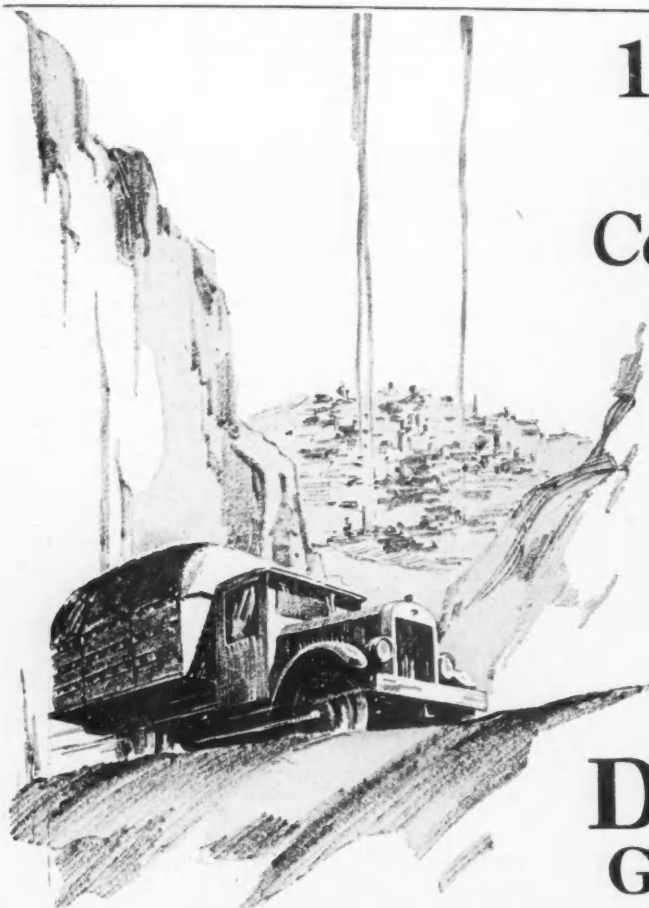
NEW YORK

VICE-PRESIDENT

ARNOLD L. DAVIS, SECRETARY

F. C. STEVENS, TREASURER





12 Months a Year DIXON'S 677 Constantly Lubricates

Neither heat nor cold affects the constant lubrication afforded by Dixon's 677. On the longest grind, be it winter, summer, spring or fall, Dixon's protects those heavy duty parts with its film of graphite and film of grease. Real double protection is the reason that Dixon's is known as *the* 100% lubricant.

Pure flake graphite mixed in exact proportions with grease is the secret of how to keep transmissions and differentials on the road. In any season, Dixon's is right. Send for our Bulletin No. 112-G, Joseph Dixon Crucible Co., Jersey City, N. J.

DIXON'S 677 GRAPHITE GREASE

ATTERBURY

DELIVERING SERVICE OVER THE COPPER HIGHWAYS

IN the truck business, the name of the user is as important as the name of the manufacturer. The Tonawanda Power Co., a division of the famous Niagara-Hudson network, is another representative user who depends on Atterbury trucks.

Twenty-seven years of experience are built into the line of 1 to 5 ton Atterbury Sixes. The 1930 specifications are worth writing for.

ATTERBURY MOTOR CAR CO.
Elmwood Avenue at Hertel, Buffalo, N. Y.



*You'll Enjoy Doing Business With ATTERBURY,
America's Oldest Exclusive Truck Manufacturer*

A BALANCED TRUCK...

A BALANCED ORGANIZATION



DAY-ELDER



The world-wide reputation of performance enjoyed by Day-Elder trucks and buses is the outcome of high engineering standards combined with proven units to create a *balanced* product notable for its service. Further than that, the experience of Day-Elder dealers not only with the truck, but with the factory itself, indicates that behind it is a *balanced* organization functioning both to build a superior truck, and to enhance the sales opportunities of its dealers by full cooperation. Executives of this Company, with years of successful experience as dealers, are responsible for the shaping of a sales policy which it is to your interest to learn about in detail.

Do you want to represent a *BALANCED* truck sponsored by a *BALANCED* organization? Let us tell you more about Day-Elder. Wire or cable for details of our exclusive Franchise plan.

NATIONAL MOTORS MFG. CO.
IRVINGTON, N. J.

Export Office at 15 Park Row, N. Y. C.

"Seven months saving—approximately \$432.00"

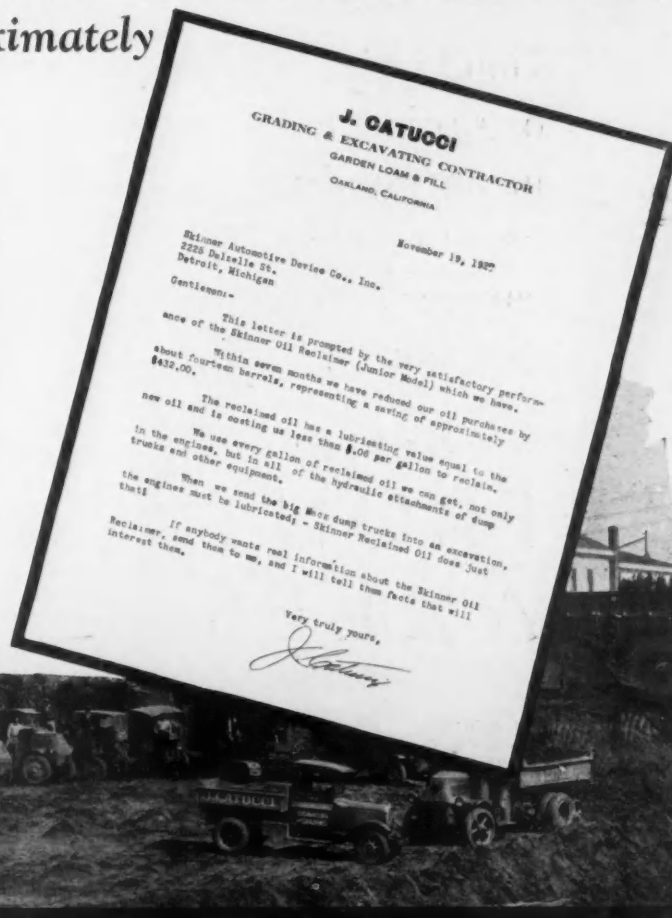
This is but one of the many letters we receive daily. It is a typical example of a Skinner installation. The following quotations from the editorial section of the May issue of this publication will give you a clear idea of what Skinner Oil Reclaimers can do for you.

"Renewed oil is as good as new and money can be saved by reconditioning it, according to these authori-

ties. Many operators make no discrimination between renewed oil and the original oil, in fact, they dump renewed oil in fresh oil tanks. By salvaging oil from crankcase drainings, oil is obtained at a cost ranging from 5 to perhaps 18 cents per gallon and oil at these figures is a bargain."

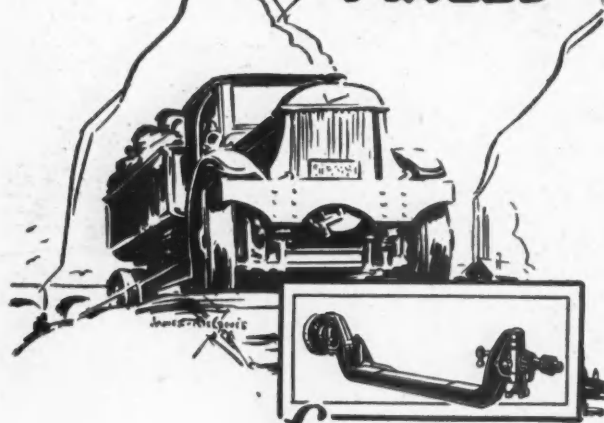
Ask about the Junior and Senior models for large or small truck fleets.

SKINNER AUTOMOTIVE DEVICE CO., INC.
2231 Dalzelle, Cor. Fourteenth
DETROIT, MICHIGAN



SHULER

FRONT AXLES



for **TRUCKS**
Tractors and Trallers

GOOD

Good order in our organization has meant good orders on our books because it permits us to make

better
**FRONT
AXLES**

SHULER AXLE CO.
INCORPORATED
LOUISVILLE KENTUCKY

July, 1930

Hand This to the Next Customer You See . .

Let Me Suggest—

THE most economical cost system I know of. Other motor fleet owners and operators have tried it at my suggestion, and say it is fine.

The Commercial Car Journal and Operation & Maintenance Standard Cost System is a simple, convenient and inexpensive method of keeping close tabs on your trucks and drivers.

It costs only \$9.50 for 500 Driver's Cards, 60 Monthly Summary Sheets, 1 complete Instruction Book and 1 Binder.

I don't get a cent out of it, but if it makes more money for you, that should mean better business for me. I'm glad to pass along the idea.

The address is:

**Chilton Class Journal
Company**

Chestnut and 56th Sts.

Philadelphia

Your Dealer



Controlled by the
United Business Publications, Inc.

*The Commercial Car Journal
and Operation & Maintenance*

No More Searching Parties— for Wrenches to Handle the Job!



OBSTRUCTION
SET 2040



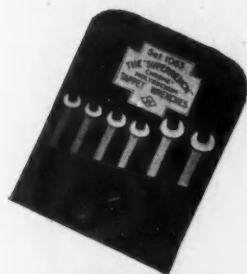
ELECTRICAL
SET 1120



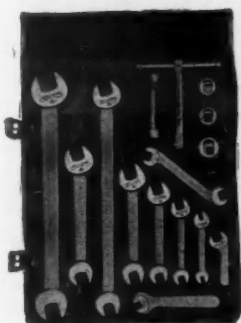
SERVICE SET 1025



DUOHEX-BOX
SET 8187



TAPPET SET 1063



BRAKE SET 1950

*The Commercial Car Journal
and Operation & Maintenance*

BACK up your service with complete "Superrench" helpfulness. No more rummaging about the shop for wrenches to handle the job at hand. No more fumbling work with wrenches not suited to the part. For modern brake service — tappet adjustments — work in close quarters—for every automotive job, there's a SET of "Superrenches" that simplifies the work. You'll have fewer wasted minutes on your payroll.

No other manufacturer offers you so complete a line of break-proof wrenches. Each is made for its particular job. Each is light and thin. But *strong*! When a "Superrench" takes hold, the nut moves — or the bolt breaks.

*Every "Superrench" is
Guaranteed
Against Breakage*

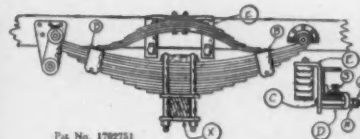
WILLIAMS
"SUPERRENCH"
(Chrome-Molybdenum)
SETS

J. H. WILLIAMS & CO.
"The Wrench People"
New York BUFFALO Chicago



Thar's Gold! on that thar Truck!

Equipped with Trainor Safe-T-Springs, the truck carries a full *extra ton* more than ever before. That's the profit load—the load that spells actual gold for the truck owner.



Pat. No. 1702751

TRAINOR SAFE-T-SPRING

The Trainor Safe-T-Spring is an auxiliary spring that levels the load and absorbs the added weight of an extra ton without putting any strain on the regular springs.

In fact it eliminates any danger of broken springs—gently taking up sudden jolts and jars that so often cause spring breakage.

NO HOLES TO DRILL

The Trainor Safe-T-Spring is easy to install. There are no holes to drill. It clamps onto the frame and will not come off.

*Write today for illustrated
literature*

A Complete Range of Springs for All Types of Motor Vehicles

TRAINOR
National Spring Co.
Newcastle, Indiana

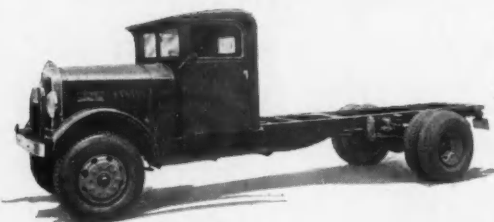
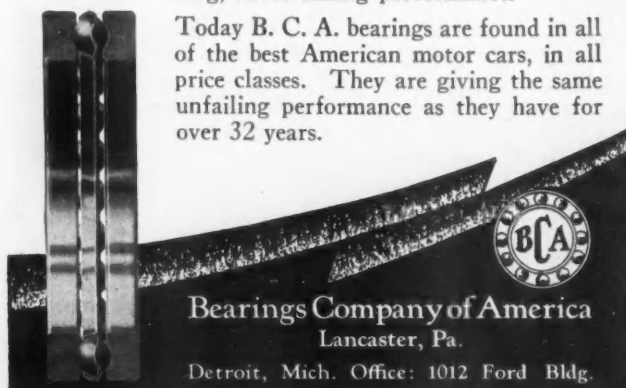
July, 1930



Even Before the Days of the Automobile

LONG before the days of the modern automobile B. C. A. products had acquired a reputation for smooth-running, never-failing performance.

Today B. C. A. bearings are found in all of the best American motor cars, in all price classes. They are giving the same unflinching performance as they have for over 32 years.



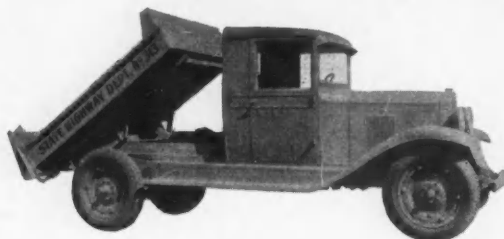
A Double Boost for Dealers!

A quality product that sells easily and that stays sold is a boon to any dealer. But if he is to make the most out of his franchise, dealer profit must be available.

Selden Hahn understands the problems of the dealer. It has provided him, first with a quality truck that enables him to outpoint competition and second with a dealer plan that is a real profit opportunity.

Write or wire for information on the Selden Hahn franchise. Our district man will be glad to discuss this sales and profit opportunity without obligation to you.

Selden Hahn
Motor Truck Corporation
Allentown, Pa.



THE LEADER!

More new Anthony Rotating Power Hoist Dump Bodies have been sold than all other mechanical power hoists combined.

Thousands in actual use. It has not been necessary for any one to lose one minute for service or replacement, nor has it been necessary to replace a single part on a single body. Proof again of the superiority of Anthony Dump Bodies.



ORIGINATORS OF ROCKER AND ROLLER ROCKER DUMP BODIES

THE LIFE OF THE TRUCK
depends on the DRIVER
THE HEALTH of the DRIVER
depends on the seat

*This seat is mounted
on our adjustable AIR
SPRING BASE.*



ROAD SHOCKS are
ABSORBED
in the
SEAT BASE

PRICES
on request

No jar on the spine.
No friction on your back.
No wrinkled or worn clothes.
No body fatigue—you ride on air.
(Gas Tanks on Modern Trucks are hung on the side)

AIR SPRING SEAT BASE CO.
533-539 Totowa Ave. Paterson, N. J.



Insist upon MOR-POWER Rings from your jobber.

Send for our new chart of sizes for popular makes of cars.

The speed of the greyhound has made whippet racing popular and MOR-POWER Piston Rings are popular because they add mor-speed, endurance and mor-power to any motor.

MOR-POWER Rings are chosen by careful and capable service stations everywhere. Made in the heart of the industry to car builders' original specifications—standard on Lincoln, Ford and many other popular makes of cars.

Packed in three color cartons, with enough rings for complete replacement job. When motor is down replace all the old, worn rings with MOR-POWER. There's an additional profit for you.

Greater speed, mor-power, and lasting endurance mean satisfied customers—install MOR-POWER Rings in your next job.

SUPERIOR PISTON RING CO., INC.

6432 Epworth Blvd. Detroit, Michigan

European Branch

Bonded Stock in Antwerp
66 rue Hotel des Monnaies, Brussels, Belgium
In charge of Cornelissen & Stakgold
Canadian Warehouse—The Flaherty Mfg. Co.
Hamilton, Ontario



They Sell by Comparison New SCHACHT De Luxe Series

The SCHACHT dealer does not let competition worry him. He closes the sale by inviting a point-by-point comparison of his truck with any other on the market. He knows that such comparison will make the sale for him—for in performance, in smart appearance, in price, in value, the new Schacht De Luxe Models speak for themselves.

The new SCHACHT De Luxe line is complete—capacities $1\frac{1}{2}$ to $7\frac{1}{2}$ tons. It offers outstanding selling advantages for 1930. Write or wire for details.

The LeBlond-Schacht Truck Company,
Cincinnati, Ohio

Successful Truck Manufacturers for Over 20 Years

MILEAGE RECORDS

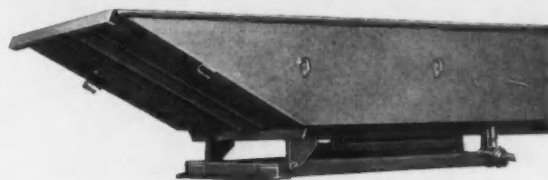
COST CONTROL

Veeder-ROOT HUB ODOMETERS

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Mansfield, Ohio

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The Hughes-Keenan Company, Mansfield, Ohio

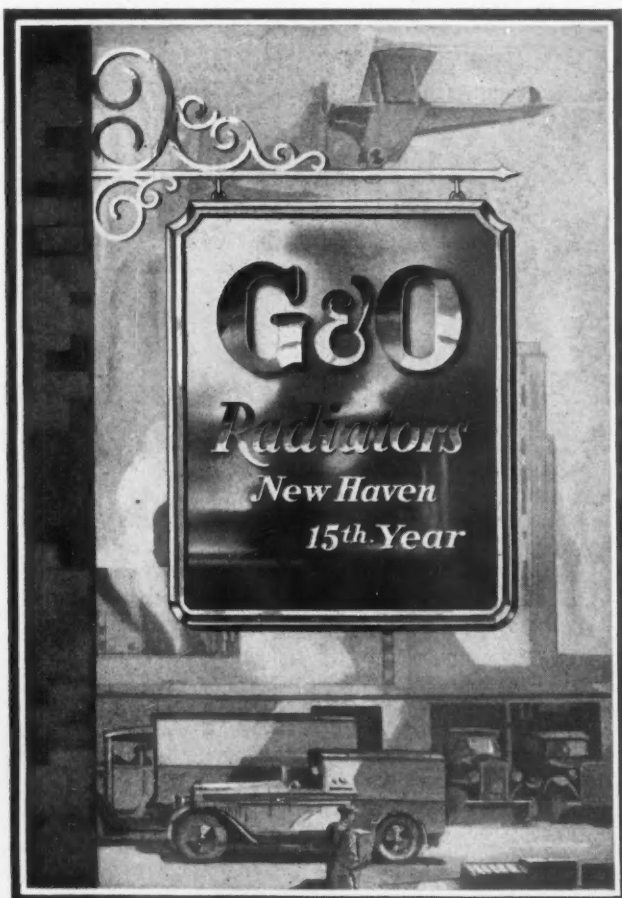
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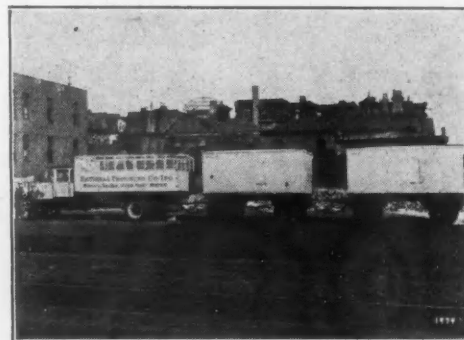
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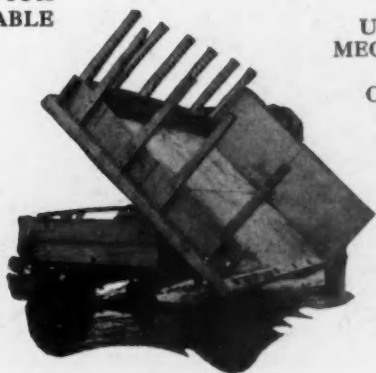


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UNIQUE
MECHANISM
NO
OTHER
LIKE
IT



Recorder
5 3/4 inches.

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T.I.M.

This chart is an actual reproduction
of a trip made by a moving van from
Philadelphia to Chicago and return.
Heavy line indicates operating time.
Light line idle time.

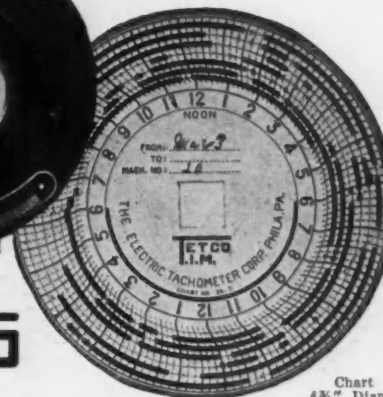


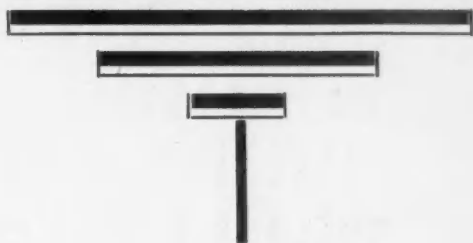
Chart
4 3/4" Diam.

Your Personal Representative

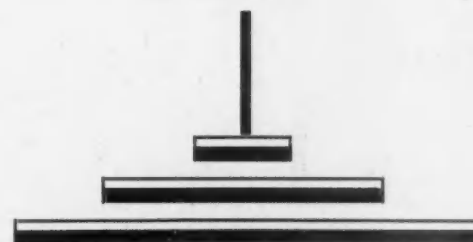
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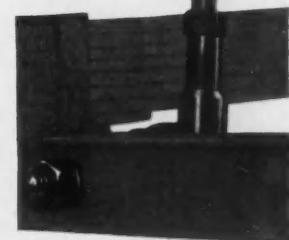


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The powerful Houdaille definitely increase ton miles by "pulling the teeth" of the shock spots — saving the load, chassis, springs, axles and tires.

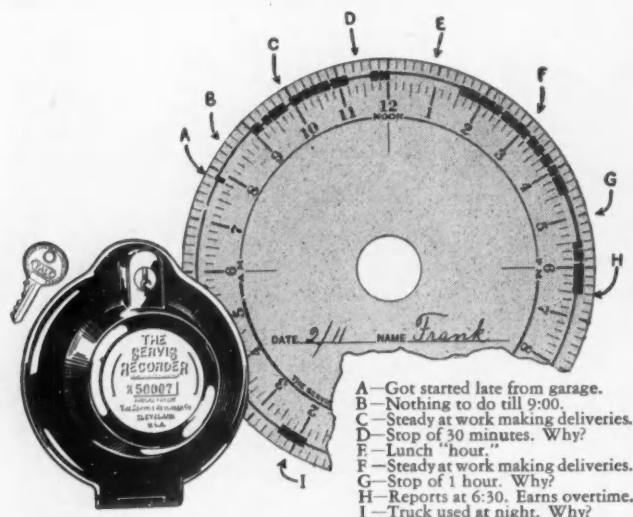
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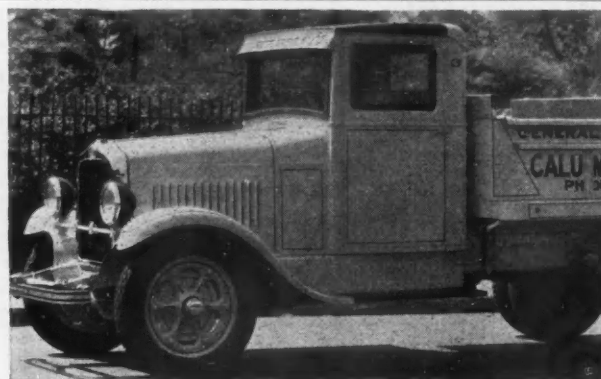
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COUPE CAB

Motor trucks—new or rebuilt—sell more readily when equipped with Highland Cabs.

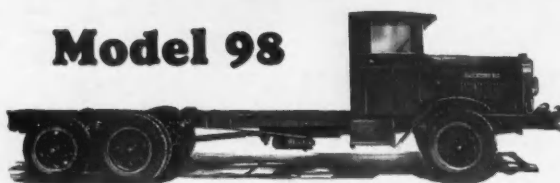
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Model 98



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For Use with Single and Dual Pneumatic Tires

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—independent of storage battery—
for MOTOR TRUCKS
and BUSES





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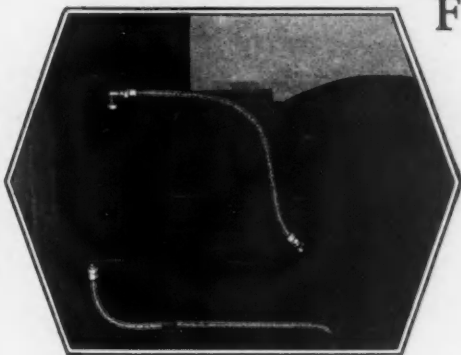
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Not only is the Zenith principle of carburetion time tested and proved, but Zenith carburetors are designed and constructed to meet the needs of heavy-duty service under every kind of working condition.

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STRONG TO BEAR BURDENS
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3.3 TONS
DEAD WEIGHT
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20 Tons a Day
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equipped with Spoksteel
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new peaks.

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\$830

Standard Chassis—f. o. b. Detroit

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